All manuals and user guides at all-guides.com

acer

all-guides.com

Acer AL1722
Service Guide

All manuals and user guides at all-guides.com

Service Guide Version and Revision

No.	Version	Release Date	Revision
1	1.0	Jan.12, 2005	Original release

All manuals and user guides at all-guides.com

Copyright

Copyright 2005 LiteOn Technology Corp.

All rights reserved.

This manual may not, in whole or in part, be copied, photocopied, reproduced, translated, or converted to any electronic machine readable form without prior written permission of LiteOn Technology Corp.

ACER AL1722 Service Manual.

Printed in Taiwan.

Disclaimer

The information in this guide is subject to change without notice. Acer Incorporated makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties of merchantability or fitness for any particular purpose. Any Acer Incorporated software described in this manual is sold or licensed "as is". Should the programs prove defective following their purchase, the buyer (and not Acer Incorporated, its distributor, or its dealer) assumes the entire cost of all necessary servicing, repair, and any incidental or consequential damages resulting from any defect in the software.

Acer is a registered trademark of Acer Corporation.
Intel is a registered trademark of Intel Corporation.
Pentium and Pentium II/III are trademarks of Intel Corporation.
Other brand and product names are trademarks and/or registered trademarks of their respective holders.

Trademarks

LiteOn is a registered trademark of LiteOn Technology Corp.
All other trademarks are property of their respective owners.

All manuals and user guides at all-guides.com

Conventions

The following conventions are used in this manual:

Screen messages	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

All manuals and user guides at all-guides.com

Warning: (For FCC Certified Models)

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Notice:

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.
3. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. It is the responsibility of the user to correct such interference.

As an ENERGY STAR® Partner our company has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Warning:

To prevent fire or shock hazard, do not expose the monitor to rain or moisture. Dangerously high voltages are present inside the monitor. Do not open the cabinet. Refer servicing to qualified personnel only.

All manuals and user guides at all-guides.com

Precautions

- Do not use the monitor near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
- Do not place the monitor on an unstable trolley, stand, or table. If the monitor falls, it can injure a person and cause serious damage to the appliance. Use only a trolley or stand recommended by the manufacturer or sold with the monitor. If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacturer and follow the kit instructions.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of the monitor and to protect it from overheating, be sure these openings are not blocked or covered. Do not place the monitor on a bed, sofa, rug, or similar surface. Do not place the monitor near or over a radiator or heat register. Do not place the monitor in a bookcase or cabinet unless proper ventilation is provided.
- The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- The monitor is equipped with a three-pronged grounded plug, a plug with a third (grounding) pin. This plug will fit only into a grounded power outlet as a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install the correct outlet, or use an adapter to ground the appliance safely. Do not defeat the safety purpose of the grounded plug.
- Unplug the unit during a lightning storm or when it will not be used for long periods of time. This will protect the monitor from damage due to power surges.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- Never push any object into the slot on the monitor cabinet. It could short circuit parts causing a fire or electric shock. Never spill liquids on the monitor.
- Do not attempt to service the monitor yourself; opening or removing covers can expose you to dangerous voltages and other hazards. Please refer all servicing to qualified service personnel
- To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100 - 240V AC, Min. 3.5A.
- The wall socket shall be installed near the equipment and shall be easily accessible.
- For use only with the attached power adapter (output 12V DC) which have UL, CSA listed license

All manuals and user guides at all-guides.com

Special Notes On LCD Monitors

The following symptoms are normal with LCD monitor and do not indicate a problem.

Notes

- Due to the nature of the fluorescent light, the screen may flicker during initial use. Turn off the Power Switch and then turn it on again to make sure the flicker disappears.
- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- The LCD screen has effective pixels of 99.99% or more. It may include blemishes of 0.01% or less such as a missing pixel or a pixel lit all of the time.
- Due to the nature of the LCD screen, an afterimage of the previous screen may remain after switching the image, when the same image is displayed for hours. In this case, the screen is recovered slowly by changing the image or turning off the Power Switch for hours.

All manuals and user guides at all-guides.com

Table Of Contents

Chapter 1 Monitor Features **8**

Induction 9
Electrical Requirements 10
LCD Monitor General Specification 11
LCD Panel Specification 12
Support Timing 13
Block Diagram 15
Main Board Diagram 16
Software Flow chart 17
Main Board Layout 18
Front Bezel 22
Rear Bezel 23

Chapter 2 Operating Instructions **24**

External Controls 24
Front Panel Controls 25
Adjusting the picture 26
Hot-Key Menu 30
OSD Message 30
LOGO 31

Chapter 3 Machine Disassembly **32**

Chapter 4 Troubleshooting **39**

Chapter 5 Connector Information **45**

Chapter 6 FRU (Field Replacement Unit) List **46**

Exploded Diagram 47

Chapter 7 Schematic Diagram **52**

Analog and Digital Input 52
TSU56AK 53
LVDS 54
DC Power 55
MCU/Key Board Connector 56
Audio 57
Inverter Board 58

All manuals and user guides at all-guides.com

Chapter 1

Monitor Features

Introduction

Scope

This specification defines the requirements for the 17" MICRO-PROCESSOR based Multi-mode supported high resolution color LCD monitor. This monitor can be directly connected to general 15 pin D-sub VGA connector and 24 pin DVI connector. It also supports VESA DPMS power management and plug & play function. There is a build-in stereo audio amplifier with OSD control to drive a pair of speakers.

Description

The LCD monitor is designed with the latest LCD technology to provide a performance oriented product with no radiation. This will alleviate the growing health concerns. It is also a space saving design, allowing more desktop space, and comparing to the traditional CRT monitor, it consumes less power and gets less weight in addition MTBF target is 50k hours or more.

Chart of AL1722

Panel	17" Samsung LTM170EU-21
Signal Interface	D-SUB
	DVI
Sync Type	Separate / Compatible
Color Temp User Adjust	Support
DDC	DDC2B
Speaker	1.5W + 1.5W (Rated power)
Headphone Jack	No
Microphone Jack	No
USB Hub	Not support
Tilt / Swivel	Yes / No

All manuals and user guides at all-guides.com

Electrical Requirements

Standard Test Conditions

All tests shall be performed under the following conditions, unless otherwise specified.

Ambient light	:	225 lux
Viewing distance	:	40 cm in front of LCD panel
Warm up time		
All specifications	:	30 minutes
Fully functional	:	5 seconds
Measuring equipment	:	Chroma 7120 signal generator or equivalent, directly Connected to the monitor under test. Minolta CA100 photometer, or equivalent
Control settings		
User brightness control	:	Maximum (unless otherwise specified)
User contrast control	:	Typical (unless otherwise specified)
User red/white balance, Green/white balance and Blue/white balance control	:	In the center (unless otherwise specified)
Power input	:	90Vac or 240Vac
Ambient temperature	:	20±5
Analog input mode	:	1280 x1024 @60 Hz

Measurement systems

The units of measure stated in this document are listed below:

1 gamma = 1 nano tesla
1 tesla = 10,000 gauss
cm = in x 2.54
lb = kg x 2.2
degrees F = [°C x 1.8] + 32
degrees C = [°F - 32]/1.8
u' = 4x/(-2x + 12y + 3)
v' = 9y/(-2x + 12y + 3)
x = (27u'/4)/[(9u'/2) - 12v' + 9]
y = (3v')/[(9u'/2) - 12v' + 9]
nits = cd/(m2) = Ft-L x 3.426
lux = foot-candle x 10.76

LCD Monitor General Specification

Panel type	:	17 " active matrix color TFT LCD
		SAMSUNG LTM170EU-21
Display size	:	337.92mm (H) 270.336mm(V)
Display mode	:	VGA 640 480 (60/75 Hz)
		SVGA 800 600 (60/75 Hz)
		XGA 1024 768 (60/70/75 Hz)
		SXGA 1280 1024 (60//75 Hz)
Pixel pitch	:	0.264mm(H) 0.264mm(V)
Display dot	:	1280 x (RGB) 1024
Pixel clock	:	135.0MHz
Contrast ratio	:	700:1
Brightness	:	300 cd/m^2
Response time (Tr/Tf)	:	8ms (Tr=1.7ms, Tf=6.3ms)
Display color	:	16.2M(RGB 8 bit Data)
Viewing angle	:	H:150 / V:135 (typ)
Pc interface	:	RGB Analog Interface
		Digital interface
Signal connector	:	D-Sub 15pin
		DVI-D 24pin
Interface frequency	:	Horizontal Frequency 30KHz ----83KHz
		Vertical Frequency 55Hz ------75Hz
Plug & play	:	VESA DDC2B
Power Input voltage	:	50/60HZ, 100 VAC to 240VAC
Total output power	:	45 Watt max.

LCD Panel Specification

LCD Panel Model (SAMSUNG LTM170EU-21)

- Display Type active matrix color TFT LCD
- Resolution 1280x1024 pixels
- Display Dot 1280x (RGB) x 1024
- Display Area 337.92mm(H) x 27.336mm(V)
- Pixel Pitch 0.294mm(H) x 0.294mm(V)
- Display Color 16.2M (true)
- Lamp Frequency 80kHz (Max)
- Lamp Current 7.0 mArms (Max)
- Weight 1900g (Max)
- Optical Specifications

I_L = 6.5mArms T_a = 25 2 C V_{DD} = 5V F_V = 60Hz F_{DCLK} = 54MHz

ITEM		Symbol	Condition	MIN.	TYP.	MAX.	UNIT
Contrast Ratio (Center of screen)		C/R	θ=0, φ=0 Normal Viewing Angle	-	700	-	
Response Time	Rising	T_r		-	1.7	-	msec
	Falling	T_F		-	6.3	-	
Luminance of white (Center of screen)		Y_L		-	300	-	cd/m^2
Color Chromaticity (CIE 1931)	Red	R_X		-	0.650	-	
		R_Y			0.330		
	Green	G_X			0.300		
		G_Y			0.600		
	Blue	B_X			0.150		
		B_Y			0.080		
	White	W_X			0.313		
		W_Y			0.329		
Viewing Angle	Hori.	θ_L	CR 10	-	75	-	Degrees
		θ_R		-	75	-	
	Ver.	φ_H		-	75	-	
		φ_L		-	80	-	
Brightness Uniformity (9 Points)		B_{UNI}		-	-	25	%

Supported Timing

Modes		Resolution	Horizontal Frequency	Vertical Frequency
VESA	VGA	640x480	31.469	59.940
		640x480	37.500	75.000
	SVGA	800x600	37.879	60.317
		800x600	46.875	75.000
	XGA	1024x768	48.363	60.004
		1024x768	56.476	70.069
		1024x768	60.023	75.029
	SXGA	1280x1024	64.000	60.000
		1280x1024	80.000	75.000
IBM	DOS	720x400	31.469	70.087
MAC	XGA	1024x768	48.780	60.001
		1024x768	60.241	74.927

Support Modes

There will be 12 total support modes to accommodate the above mode and other video modes within the frequency range of the monitor.

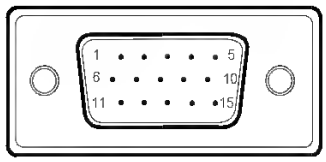
80Hz refresh rate Support

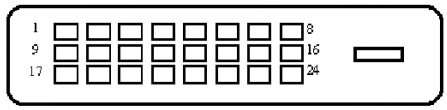
Monitor should display 80Hz refresh rate mode as emergency mode.
Monitor should display " Out of Range" warning menu at this mode.

Video Input Connector

PIN NO.	DESCRIPTION	PI N NO.	DESCRIPTION
1.	Red	9.	+5V
2.	Green	10.	Logic Ground
3.	Blue	11.	Monitor Ground
4.	Monitor Ground	12.	DDC-Serial Data
5.	DDC-Return	13.	H-Sync
6.	R-Ground	14.	V-Sync
7.	G-Ground	15.	DDC-Serial Clock
8.	B-Ground		

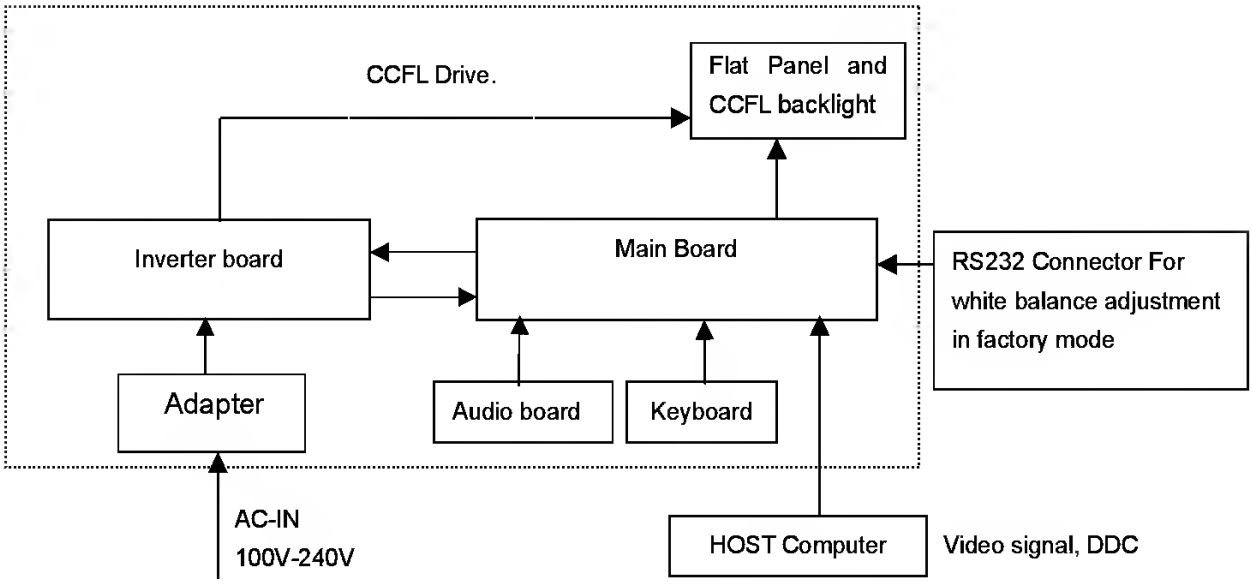
VGA Connector layout



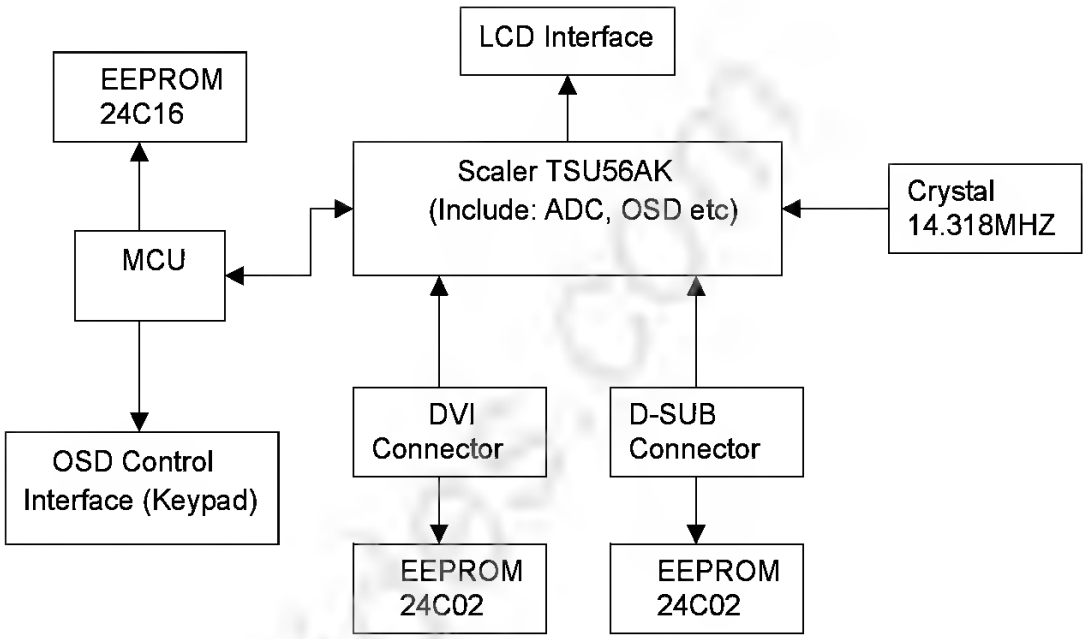
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	TMDS Data 2-	13.	TMDS Data 3-
2.	TMDS Data 2+	14.	+5V Power
3.	TMDS Data 2/4 Shied	15.	Ground (for +5V)
4.	TMDS Data 4-	16.	Hot Plug Detect
5.	TMDS Data 4+	17.	TMDS Data 0+
6.	DDC Clock	18.	TMDS Data 0-
7.	DDC Data	19.	TMDS Data 0/5 Shield
8.	Analog Vertical Sync	20.	TMDS Data 5-
9.	TMDS Data 1-	21.	TMDS Data 5-
10.	TMDS Data 1+	22.	TMDS Clock Shield
11.	TMDS Data 1/3 Shield	23.	TMDS Clock+
12.	TMDS Data 3-	24.	TMDS Clock-
DVI Connector layout			
			

Monitor Block Diagram

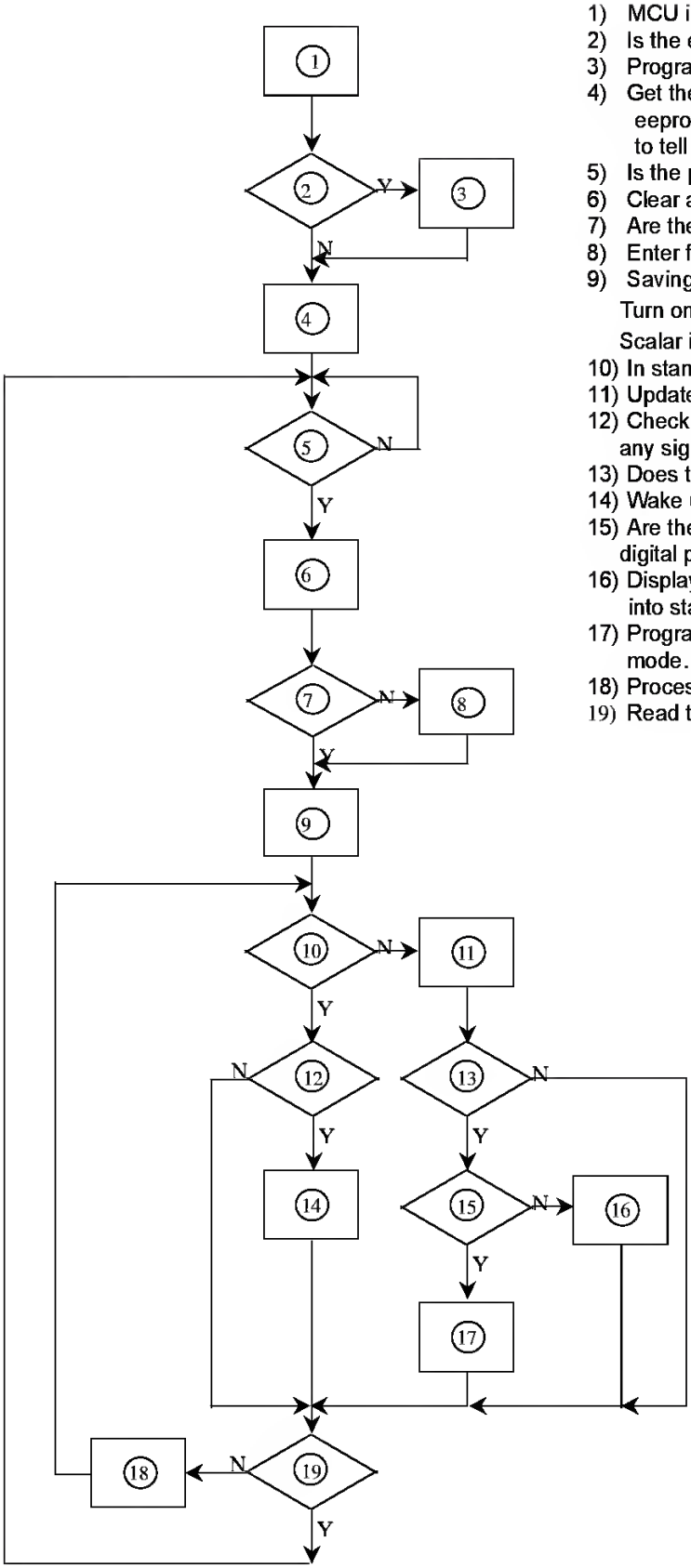
The LCD MONITOR will contain a main board, an inverter board, adapter, keypad board and audio board which house the flat panel control logic, brightness control logic and DDC.
The Inverter board will drive the backlight of panel.
The adapter will provide the 12V DC-power to inverter/power board and main board.



Main Board Diagram

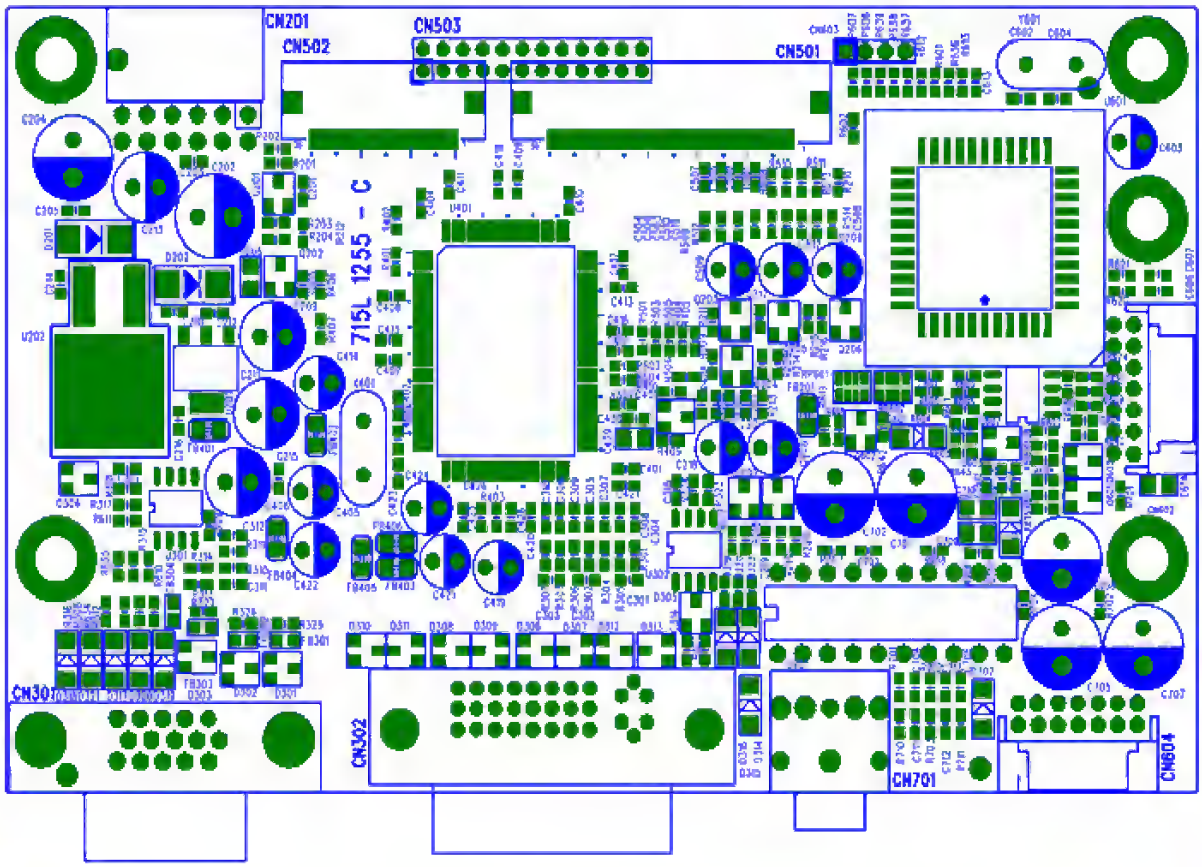


Software Flow Chart



1) MCU initialize.
2) Is the eeprom blank?
3) Program the eeprom by default values.
4) Get the PWM value of brightness from eeprom. Check the pin PANEL1 and PANEL2 to tell which panel to get with it.
5) Is the power key pressed?
6) Clear all global flags.
7) Are the AUTO and SELECT keys pressed?
8) Enter factory mode.
9) Saving the power key status into eeprom.
   Turn on the LED and set it to green color.
   Scalar initializes.
10) In standby mode?
11) Update the lifetime of back light.
12) Check the analog and digital port, are there any signals coming?
13) Does the scalar send out a interrupt request?
14) Wake up the scalar.
15) Are there any signals coming from analog or digital port?
16) Display " No Input Signal " message. And go into standby mode after the message disappear.
17) Program the scalar to be able to show the coming mode.
18) Process the OSD display.
19) Read the keyboard. Is the power key pressed?

Main Board Layout

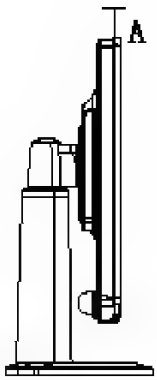


Label	Part Number	Description
U301	56L1133 34	M24C02-WMN6T SMT
U302	56L1133 34	M24C02-WMN6T SMT
U601	56L1125137SZ6	W78E65P-40
X401	93L 22 53	CRYSTAL 14.318MHz
U401	56L 562 82	SCALER IC TSU16AK
Y601	93L 22 55 J	20MHZ
U201	56G 563 38	RT9164A18PG S0T-223
U202	56L 563 7	AIC1084-33CM
U603	56L 643 5A	MAX810STR SOT-23
U602	56L1133 56	M24C16-WMN6T/W SO-8
CN301	88L 35315F HS	D-USB 15PIN
CN302	88L 35424F HS	DVI 24PIN
CN503	33G802724B H	WAFER
CN201	33L800912L H	HEADER 2*6P
CN602	33L8027 14 H	WAFER 14P 2.0MM
U701	56L 616 1	TDA7496L BY ST
CN701	88L 30210K E	PHONE JACK

The step between front bezel and back cover shall be within specification.

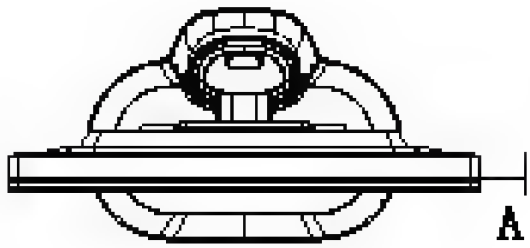
Top and Bottom
Back cover & Bezel concavity

0.8mm A 1.3 mm



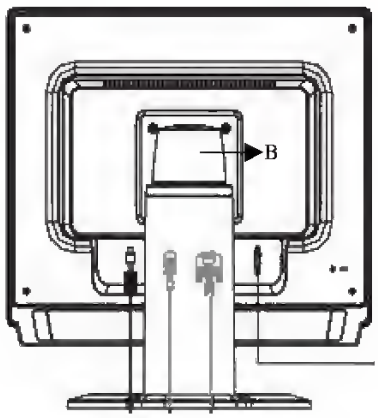
Left and Right
Back cover & Bezel concavity

0.8mm A 1.3 mm



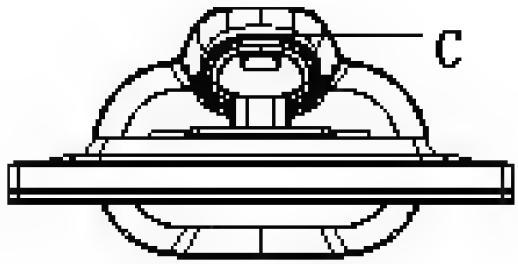
Back Cover & Hinge Cover concavity

0mm B 0.5mm



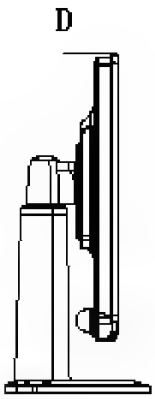
Base & Neck concavity

0mm C 0.6mm



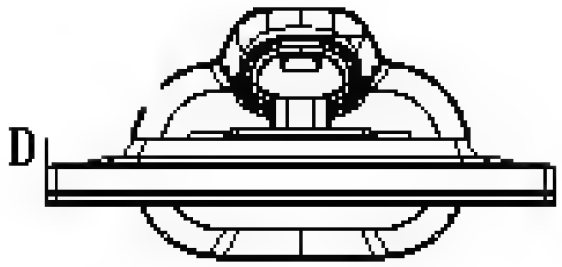
Top and Bottom
Back cover & Bezel step

0mm D 0.8 mm



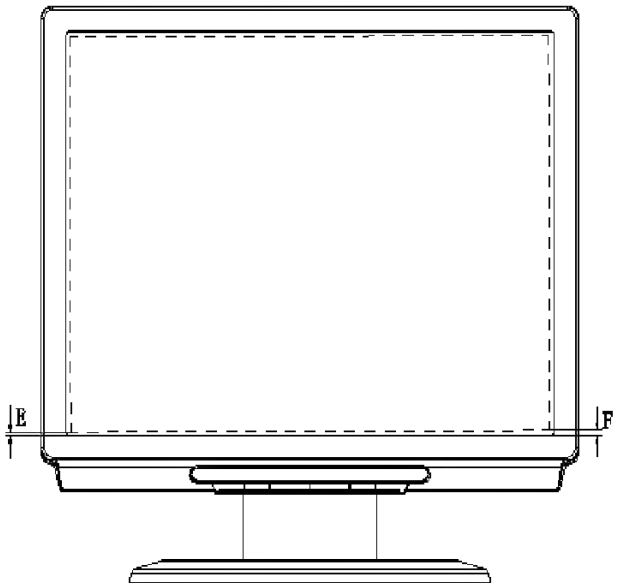
Left and Right
Back cover & Bezel step

0mm D 0.8 mm

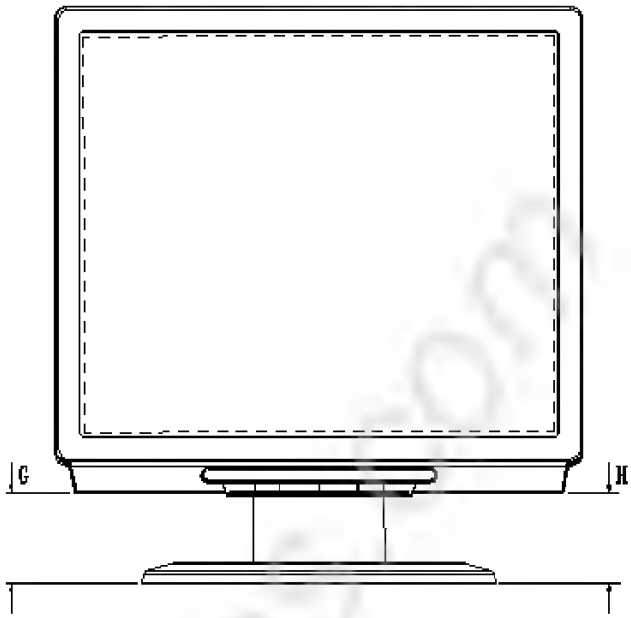


LCD Horizontally

The angle between front bezel and LCD unit in bottom side should not large than 1.0mm.



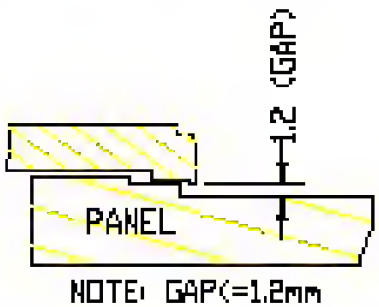
The distance of the LCD display unit from left side to right should not large than 4.0mm.



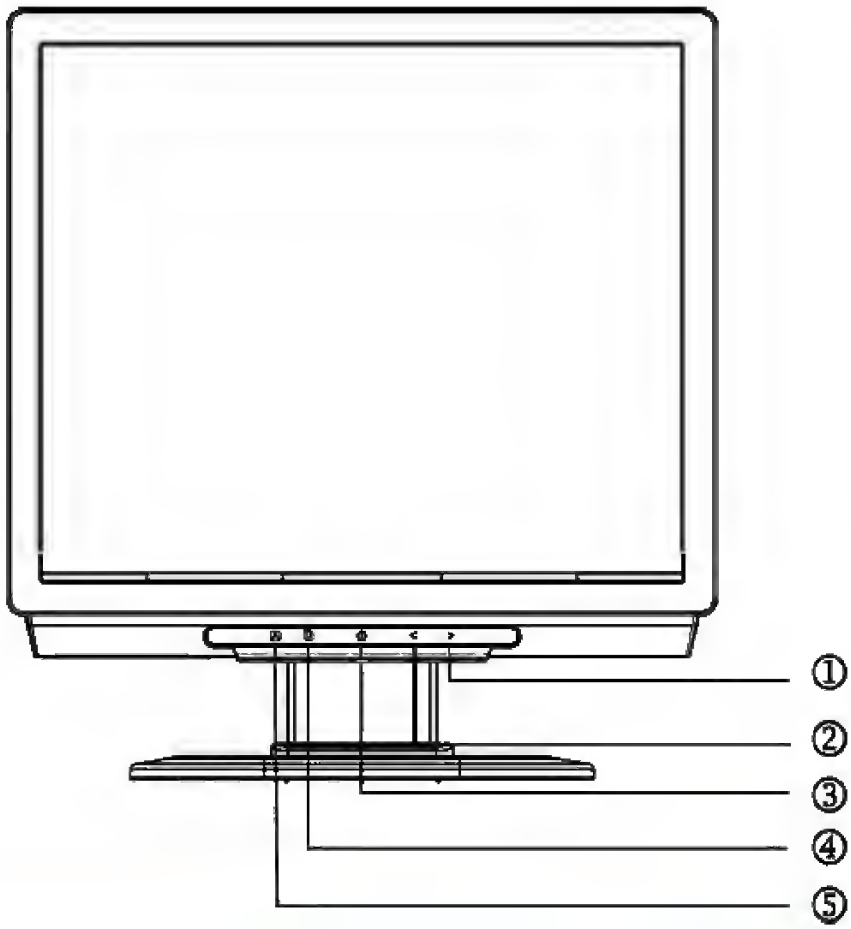
Tilt Base Rotation

Tilt up 15 2 / down 5 2

Plastic Material
For TCO99
Front Bezel ABS 94HB
Back Cover ABS 94HB
The Others ABS 94HB
For MPRII
Front Bezel ABS 94HB
Back Cover ABS 94HB
The Others ABS 94HB
GAP Spec.
Gap between panel with bezel is 0 mm < gap < 1.2 mm

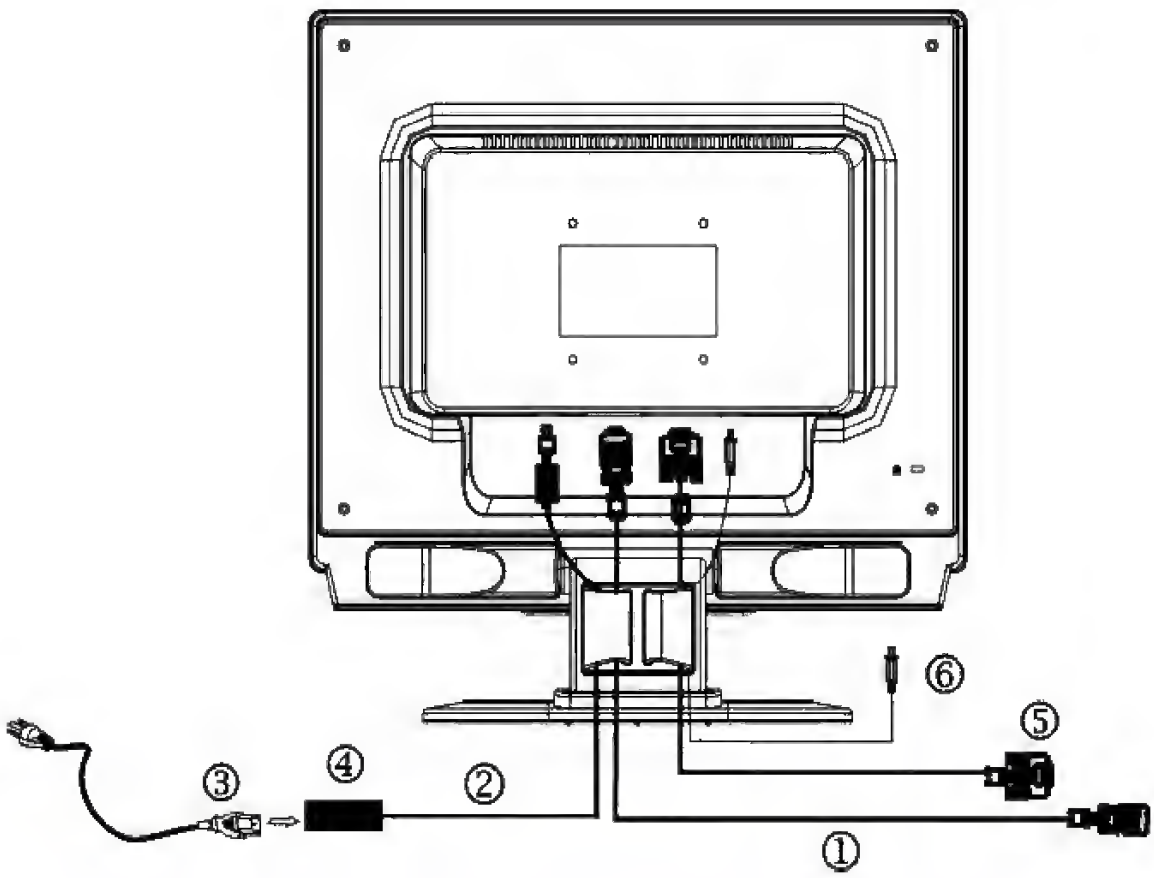


Front Bezel



Item	Description
1	>/Volume
2	</Volume
3	⏻/Power Key
4	/MENU/ENTER
5	Ⓐ/Auto Adjust Key/Exit

Rear Bezel



Item	Description
1	D-SUB CABLE
2	DC-Jack Power Cable
3	AC POWER CORD
	External Adapter
5	DVI CABLE
4	AUDIO CABLE

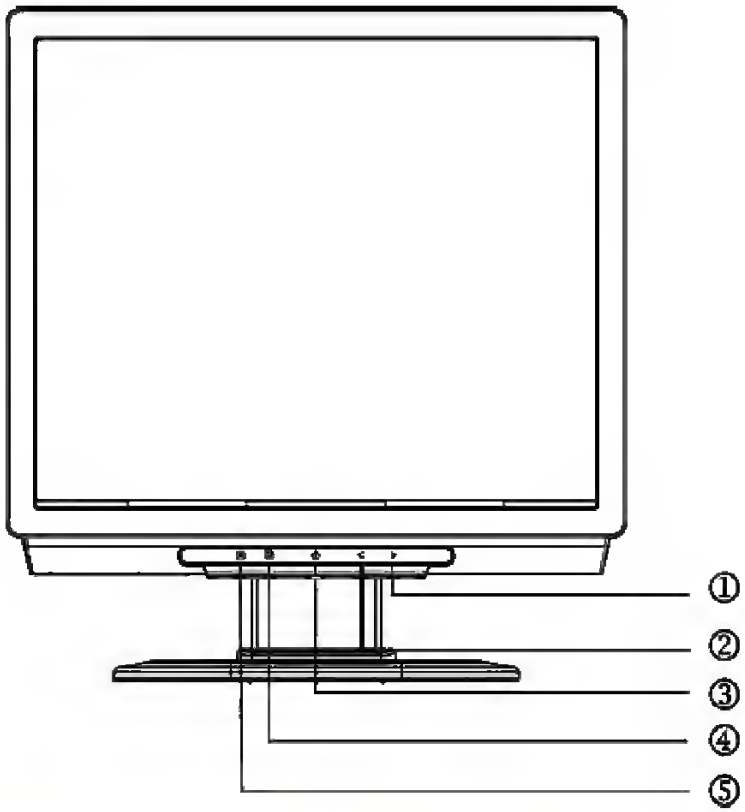
Chapter 2

Operating Instructions

Press the power button to turn the monitor on or off. The other control buttons are located at front panel of the monitor. By changing these settings, the picture can be adjusted to your personal preferences.

- The power cord should be connected.
- Connect the video cable from the monitor to the video card.
- Press the power button to turn on the monitor position. The power indicator will light up.

External Controls



Item	Description
1	>/Volume
2	</Volume
3	⏻/Power Key
4	/MENU/ENTER
5	Ⓐ/Auto Adjust Key/Exit

Front Panel Control

- **Power Button:**
  Press this button to turn the monitor ON or OFF, And display the monitor's state.

- **Menu / Enter :**
  Activate OSD menu when OSD is OFF or activate/de-activate adjustment function when OSD is ON or Exit OSD menu when in Volume Adjust OSD status.

- **</Volume:**
  Activates the volume control when the OSD is OFF or navigate through adjustment icons when OSD is ON or adjust a function when function is activated.

- **>/Volume:**
  Activates the volume control when the OSD is OFF or navigate through adjustment icons when OSD is ON or adjust a function when function is activated.

- **Auto Adjust button / Exit:**
  1. When OSD menu is in active status, this button will act as EXIT-KEY (EXIT OSD menu).
  2. When OSD menu is in off status, press this button for 2 seconds to activate the Auto Adjustment function.
     The Auto Adjustment function is used to set the HPos, VPos, Clock and Focus.

- **Power Indicator:**
  Blue — Power On mode.
  Orange — Power saving
  Light blue — Off mode
  NOTES

Notes

- Do not install the monitor in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, or excessive dust or mechanical vibration or shock.
- Save the original shipping carton and packing materials, as they will come in handy if you ever have to ship your monitor.
- For maximum protection, repackage your monitor as it was originally packed at the factory.
- To keep the monitor looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents such as thinner, benzene, or abrasive cleaners, since these will damage the cabinet. As a safety precaution, always unplug the monitor before cleaning it.

Adjusting the Picture

a. How to Adjust a Setting

1. Press the MENU-button to activate the OSD window.
2. Press <or >to select the desired function.
3. Press the MENU-button to select the function that you want to adjust.
4. Press < or >to change the settings of the current function.
5. To exit and save, select the exit function. If you want to adjust any other function, repeat steps 2-4.

I. Analog-Only Model

II. Dual-Input Model, Analog Signal Input

III. Dual-Input Model, Digital Signal Input

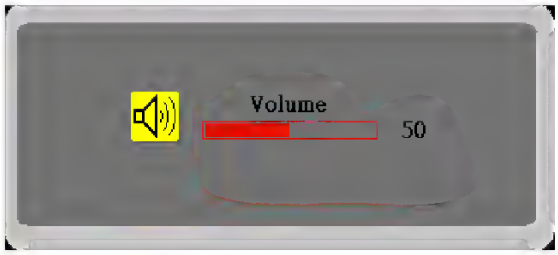
b. The Description For Control Function

Main Menu Icon	Sub Menu Item	Sub Menu Icon	Description
	Contrast		Contrast from Digital-register.
	Brightness		Backlight Adjustment
	Focus		Adjust Picture Phase to reduce Horizontal-Line noise
	Clock		Adjust picture Clock to reduce Vertical-Line noise.
	H. Position		Adjust the horizontal position of the picture.
	V. Position		Adjust the vertical position of the picture.
	Warm	N/A	Recall Warm Color Temperature from EEPROM.
	Cool	N/A	Recall Cool Color Temperature from EEPROM.
	User / Red		Red Gain from Digital-register.
	User/ Green		Green Gain Digital-register.
	User / Blue		Blue Gain from Digital-register.
	English	N/A	Set OSD display language to English.
		N/A	Set OSD display language to Traditional Chinese.
	Deutsch	N/A	Set OSD display language to German.
	Français	N/A	Set OSD display language to French.
	Español	N/A	Set OSD display language to Spain.
	Italiano	N/A	Set OSD display language to Italian.
		N/A	Set OSD display language to Simplified Chinese.
		N/A	Set OSD display language to Japanese.
	H. Position		Adjust the horizontal position of the OSD.
	V. Position		Adjust the vertical position of the OSD.
	OSD Timeout		Adjust the OSD timeout.

Main Menu Icon	Sub Menu Item	Sub Menu Icon	Description
(Analog-Only Model)	Auto Config	N/A	Auto Adjust the H/V Position, Focus and Clock of picture.
(Dual-Input Model)	Analog	N/A	Select input signal from analog (D-Sub)
	Digital	N/A	Select input signal from digital (DVI)
	Information	N/A	Show the resolution, H/V frequency and input port of current iput timing.
	Reset	N/A	Clear each old status of Auto-configuration and set the color temperature to Cool.
	Exit	N/A	Exit OSD

Hot-Key Menu

a. Outline



b. The Description For Hot-Key Function

Item	Operation	Icon	Description
Volume	When the OSD is closed, press Left or Right button will be Volume Hot-Key Function		Volume of Audio adjustment. The Audio will be Mute when volume=0

OSD Message

a. Outline

b. The Description For OSD Message

Item	Description
Auto Config Please Wait	1.) When Analog signal input, if User Press Hot-Key "Auto", will show this message, and the monitor do the auto config function. 2.) When Digital signal input, without this OSD Message.
Input Not Supported	When the Hsync Frequency, Vsync Frequency or Resolution is out of the monitor support range, will show this message. This message will be flying.
Cable Not Connected	1.) Analog-Only Model: When the video cable is not connected, will show this message. This message will be flying. 2.) Dual-Input Model: Dual-Input Model without this OSD Message.
No Signal	1.) Analog-Only Model: When the video cable is connected, but there is no active signal input, will show this message, then enter power saving. 2.) Dual-Input Model: When the video cable is not connected, or the video cable is connected but there is no active signal input, will show this message, then enter power saving.

Logo

When the monitor is power on, the LOGO will be showed in the center, and disappear slowly.

How To Optimize The DOS-Mode
Plug And Play
Plug & Play DDC1/2B Feature

This monitor is equipped with VESA DDC1/2B capabilities according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities. The communication channel is defined in two levels, DDC1 and DDC2B.

The DDC1 is a unidirectional data channel from the display to the host that continuously transmits EDID information. The DDC2B is a bidirectional data channel based on the I²C protocol. The host can request EDID information over the DDC2B channel.

This monitor will appear to be non-functional if there is no video input signal. In order for this monitor to operate properly, there must be a video input signal.

This monitor meets the Green monitor standards as set by the Video Electronics Standards Association (VESA) and/or the United States Environmental Protection Agency (EPA) and The Swedish Confederation Employees (NUTEK). This feature is designed to conserve electrical energy by reducing power consumption when there is no video-input signal present. When there is no video input signal this monitor, following a time-out period, will automatically switch to an OFF mode. This reduces the monitor's internal power supply consumption. After the video input signal is restored, full power is restored and the display is automatically redrawn. The appearance is similar to a "Screen Saver" feature except the display is completely off. The display is restored by pressing a key on the keyboard or clicking the mouse.

Using The Right Power Cord

The accessory power cord for the Northern American region is the wallet plug with NEMA 5-15 style and is UL listed and CSA labeled. The voltage rating for the power cord shall be 125 volts AC.

Supplied with units intended for connection to power outlet of personal computer: Please use a cord set consisting of a minimum No. 18 AWG, type SJT or SVT three conductors flexible cord. One end terminates with a grounding type attachment plug, rated 10A, 250V, CEE-22 male configuration. The other end terminates with a molded-on type connector body, rated 10A, 250V, having standard CEE-22 female configuration.

Please note that power supply cord needs to use VDE 0602, 0625, 0821 approval power cord in European counties.

Chapter 3

Machine Disassembly

This chapter contains step-by-step procedures on how to assemble the monitor for maintenance.

Disassembly Procedure

Disassemble the base

1. Remove hinge cover. (Fig 1)
2. Remove four screws to release stand base. (Fig 2)

Fig 1

Fig 2

Disassemble the front cover

1. Remove seven screws to release front bezel. (Fig 3)
2. Remove connector wire with keyboard and main board. (Fig 4)
3. Remove two screws to release keyboard. (Fig 5)
4. Remove connector wire with keyboard and speakers. (Fig 6)
6. Remove two screws to release speakers (right and left). (Fig 7)

Fig 3

Fig 4

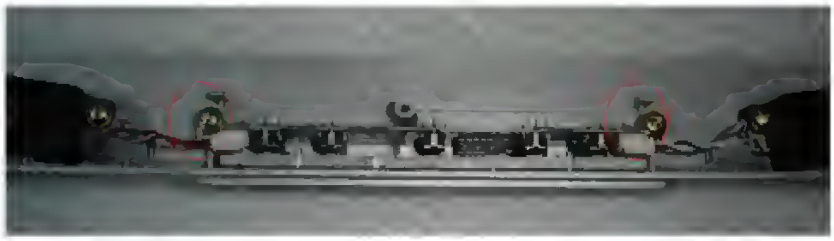


Fig 5

Fig 6

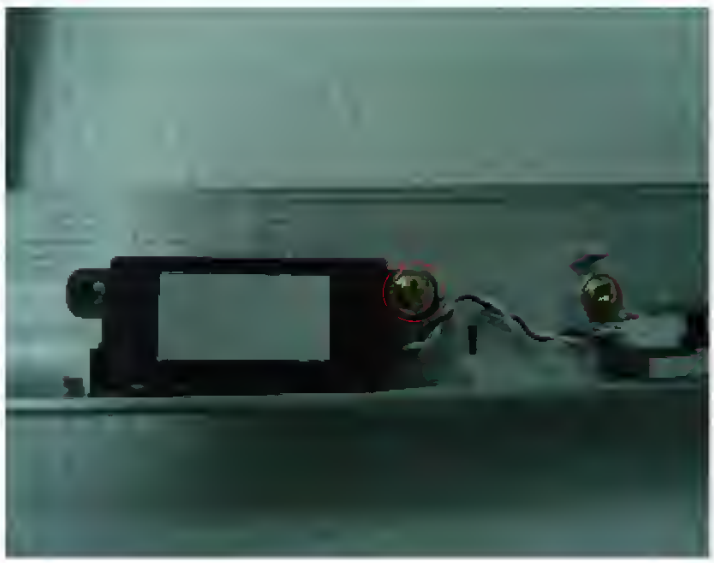


Fig 7

Disassemble the rear bezel

Disassemble the shield

1. Remove two screws to release the shield. (Fig 8)
2. Remove the shield as arrow direction.

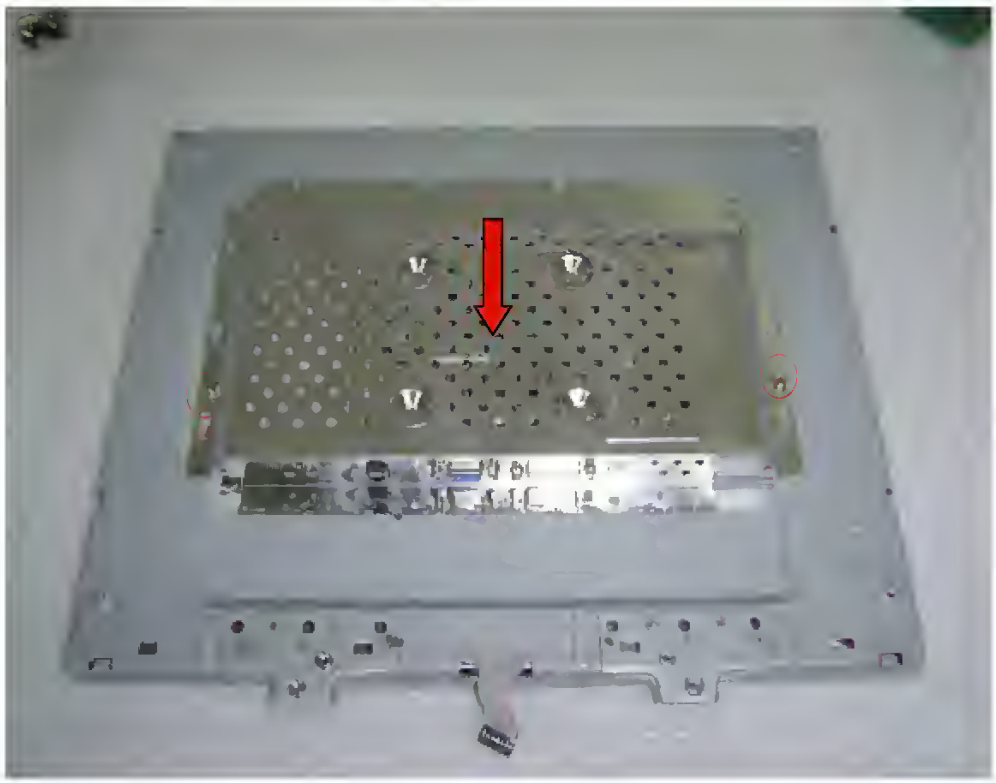


Fig8

Disassemble the main board

1. Remove four screws to release main board. (Fig 9)
2. Remove connector wires with main board and Inverter board, main board and keyboard, main board and panel. (Fig 10)

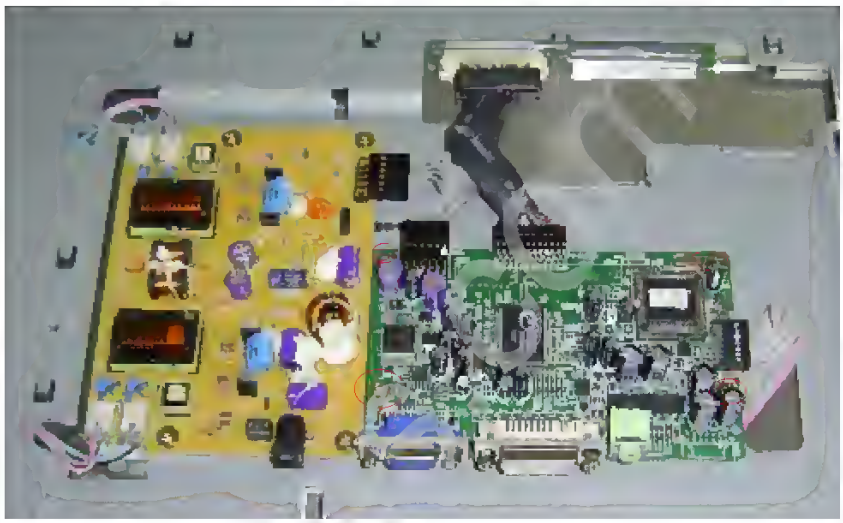


Fig 9

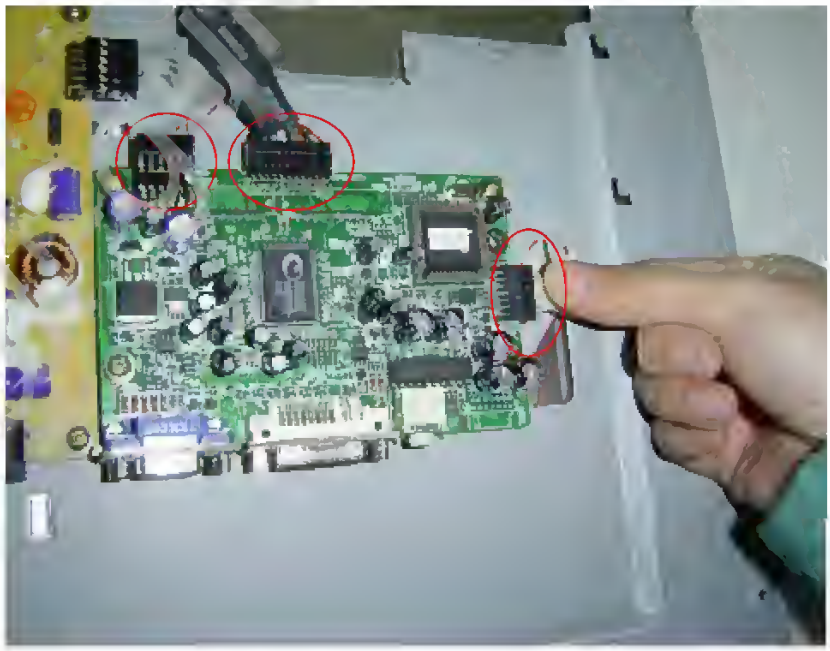


Fig10

Disassemble the Inverter board

1.Remove four screws to release Inverter board. (Fig 11)

2. Remove connector wires with Inverter board and panel. (Fig 12)

Fig11

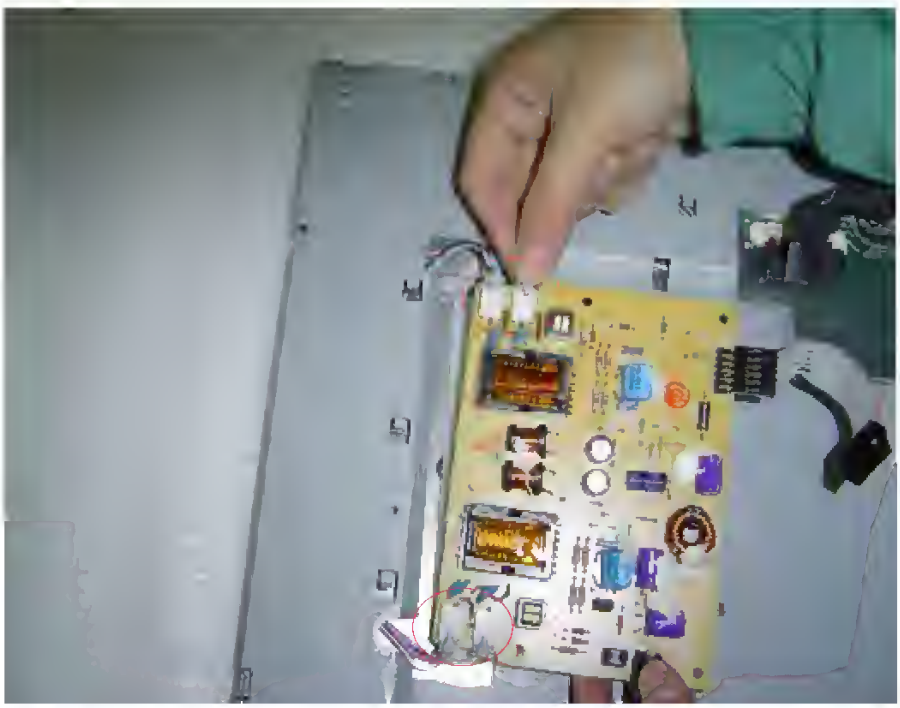


Fig12

Disassemble the panel

1. Remove four screws (right and left) to release metal frame. (Fig 13)

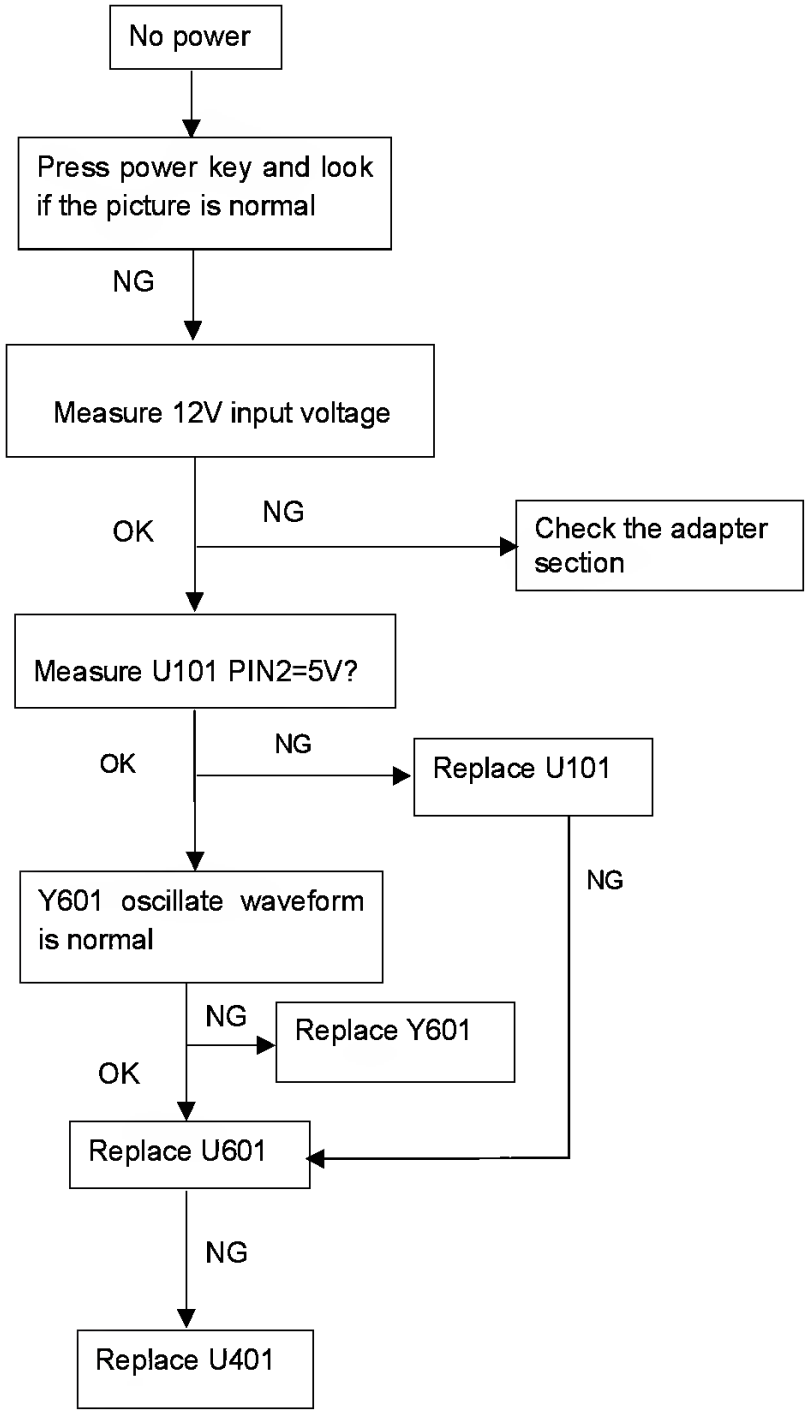
Fig13

Chapter 4

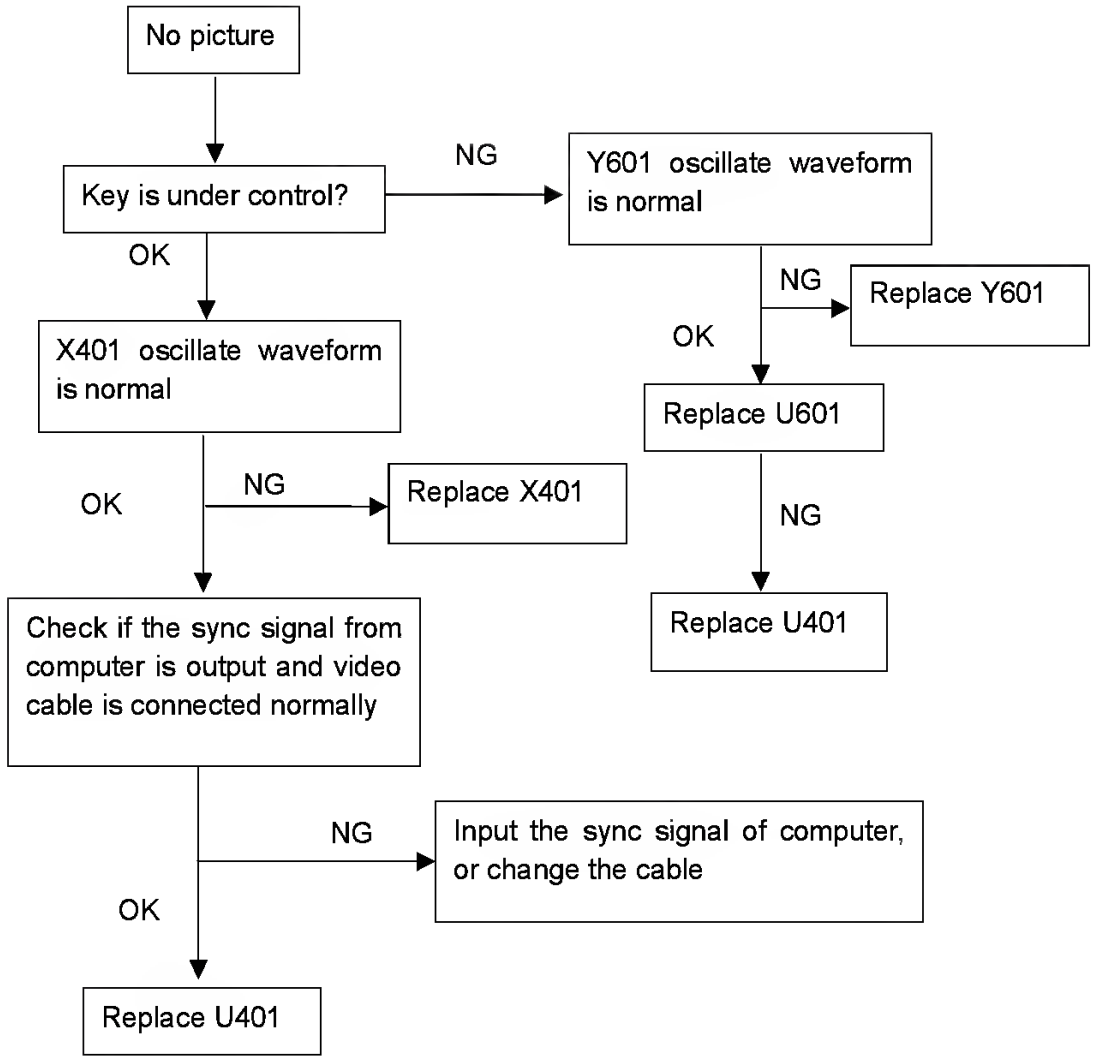
Troubleshooting

This chapter provides troubleshooting information for the AL1722:

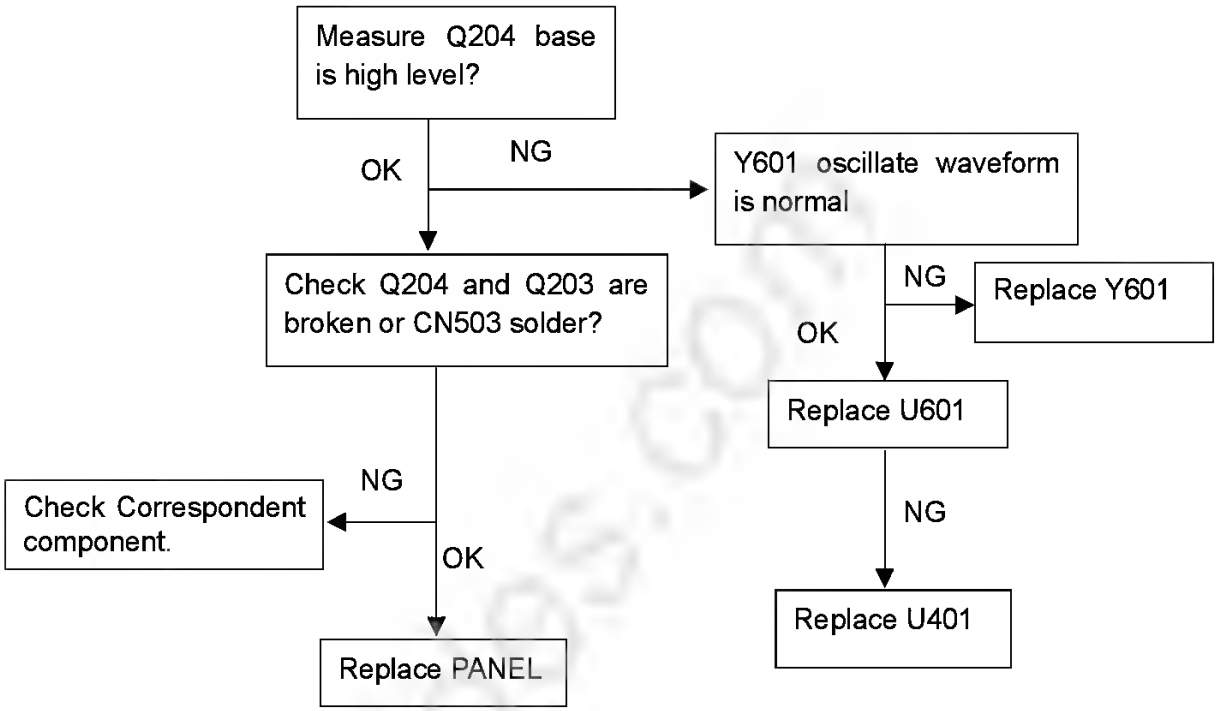
1. No power



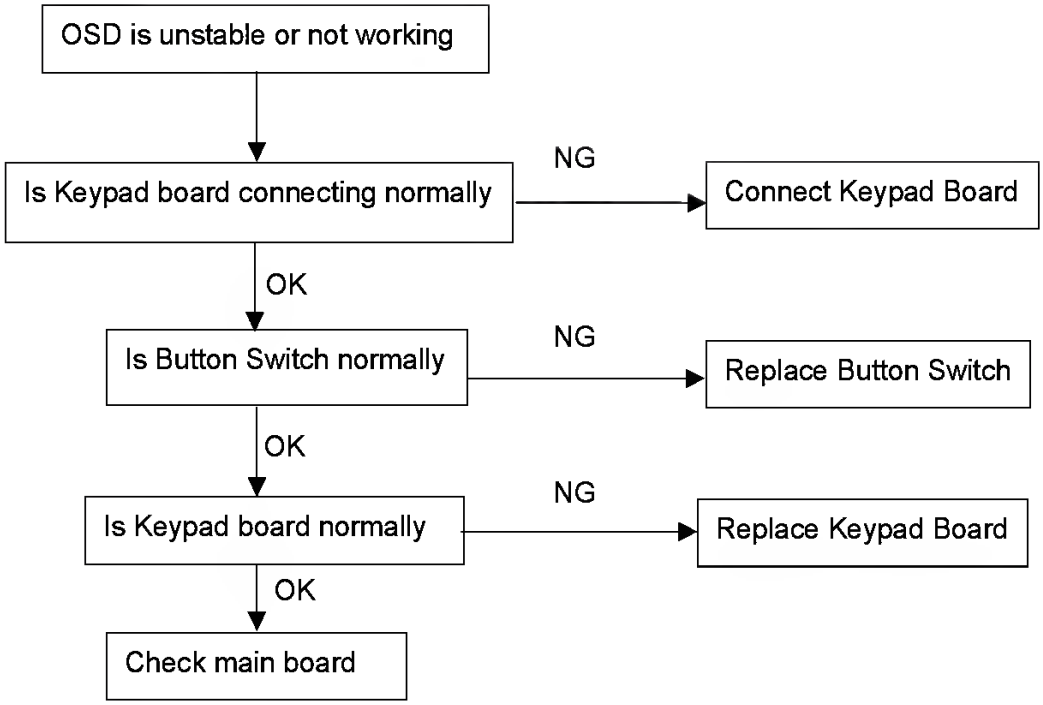
2. No picture (LED is orange)



3. Panel Power Circuit

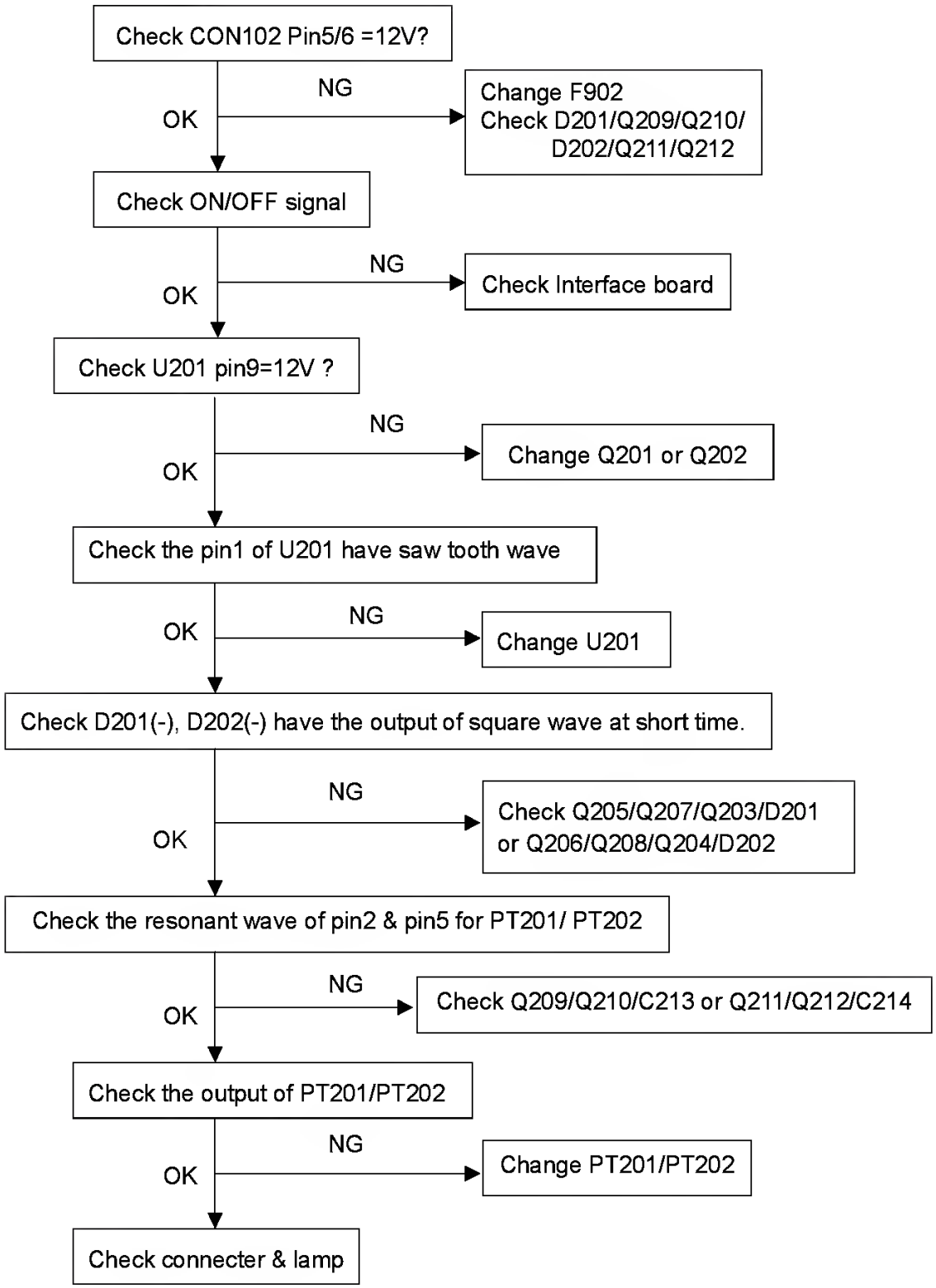


4. Keypad Board

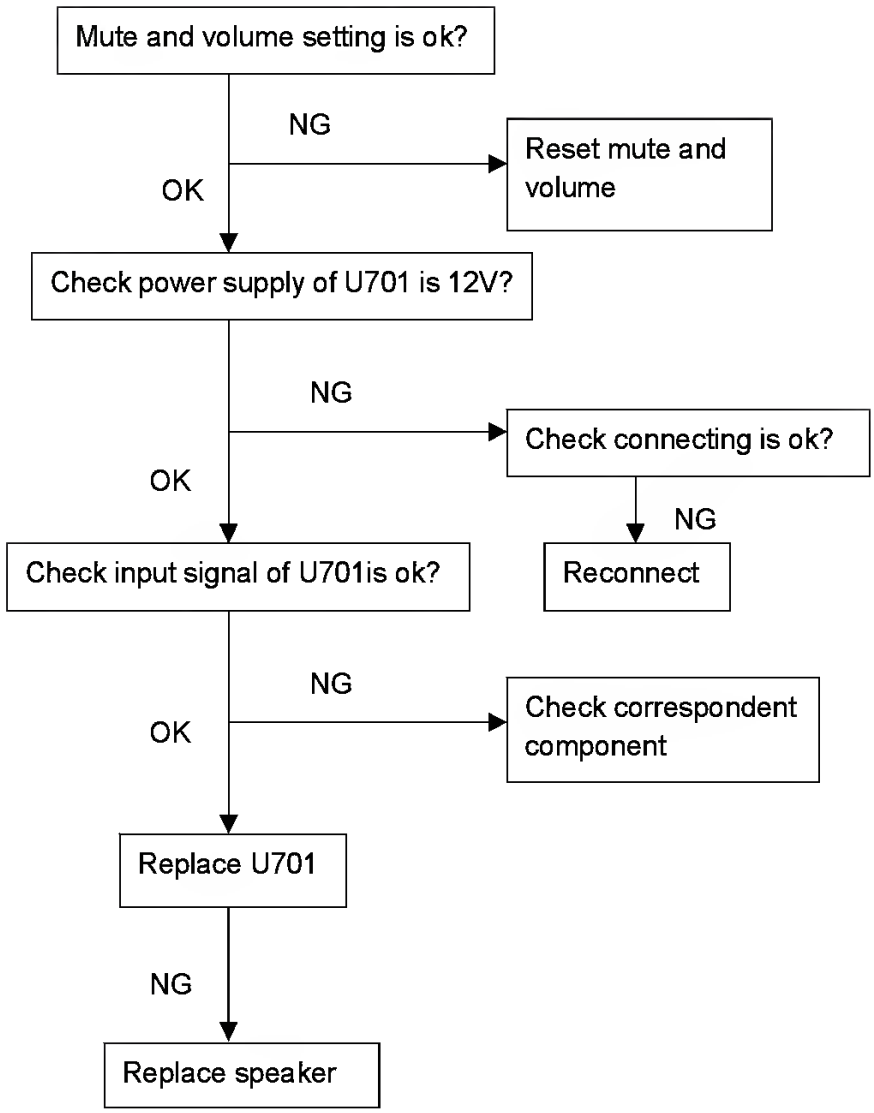


5. Inverter Board

No Backlight



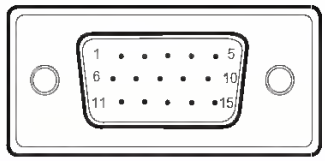
6.No Audio


Mute and volume setting is ok?
NG
Reset mute and volume
OK
Check power supply of U701 is 12V?
NG
Check connecting is ok?
OK
NG
Reconnect
Check input signal of U701is ok?
NG
Check correspondent component
OK
Replace U701
NG
Replace speaker

Chapter 5

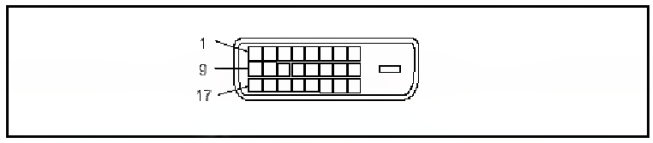
Connector Information

The following figure shows the connector locations on the monitor board:



15 – Pin Color Display Signal Cable (D-sub)

PIN NO.	DESCRIPTION	PI N NO.	DESCRIPTION
1.	Red	9.	+5V
2.	Green	10.	Logic Ground
3.	Blue	11.	Monitor Ground
4.	Monitor Ground	12.	DDC-Serial Data
5.	DDC-Return	13.	H-Sync
6.	R-Ground	14.	V-Sync
7.	G-Ground	15.	DDC-Serial Clock
8.	B-Ground		



24 – Pin Color Display Signal Cable (DVI)

PIN NO.	DESCRIPTION	PI N NO.	DESCRIPTION
1.	TMDS Data2-	13.	TMDS Data3+
2.	TMDS Data2+	14.	+5V Power
3.	TMDS Data 2/4 Shield	15.	Ground
4.	TMDS Data4-	16.	Hot Plug Detect
5.	TMDS Data4+	17.	TMDS Data0-
6.	DDC Clock	18.	TMDS Data0+
7.	DDC Data	19.	TMDS Data 0/5 Shield
8.	Analogue Vertical Sync	20.	TMDS Data5-
9.	TMDS Data1-	21.	TMDS Data5+
10.	TMDS Data1+	22.	DDC Clock Shield
11.	TMDS Data 1/3 Shield	23.	DDC Clock+
12.	TMDS Data3-	24.	DDC Clock-

Chapter 6

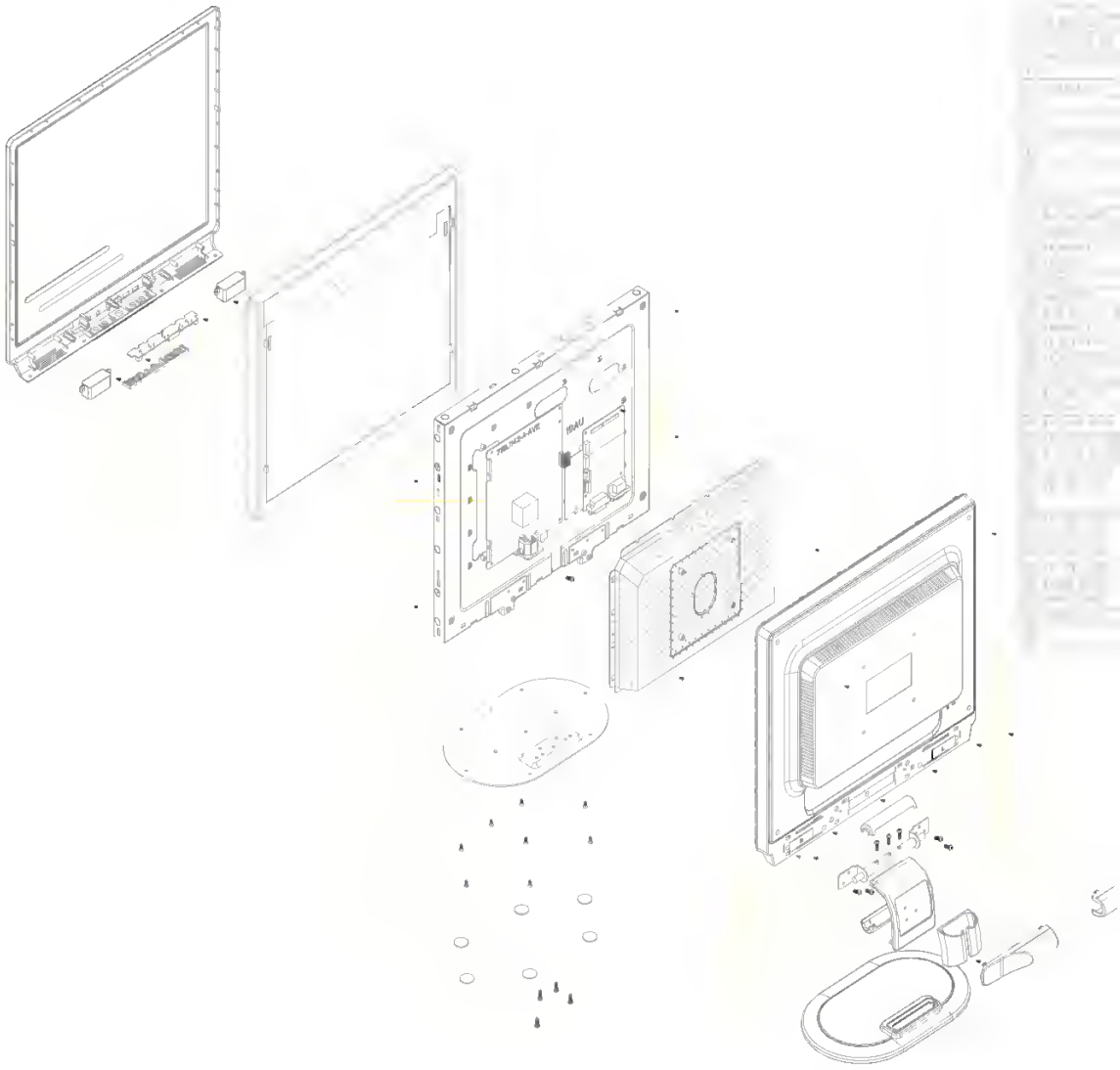
FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of AL1722.Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

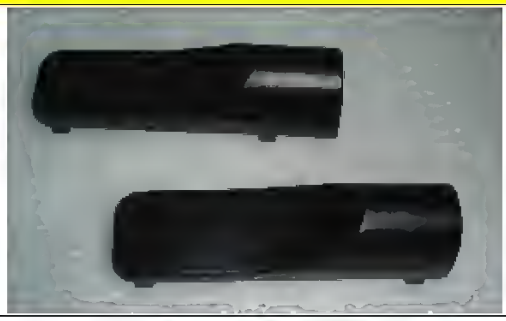
NOTE: Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel (http://aicsl.acer.com.tw/spl/). For whatever reasons a part number change is made, it will not be noted in the printed Service Guide. For ACER AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

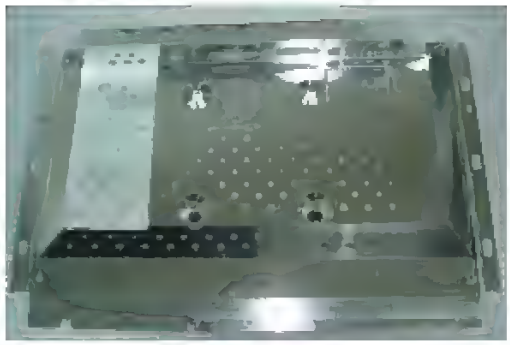
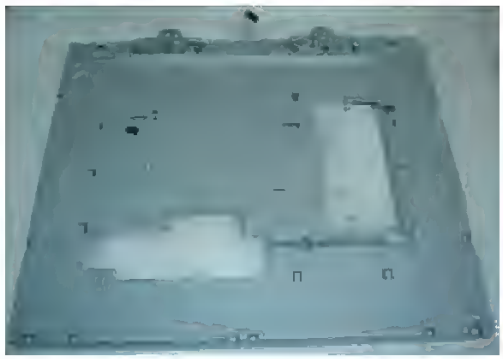
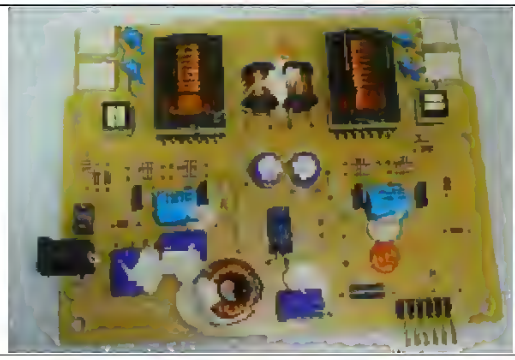
NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional Acer office on how to return it.

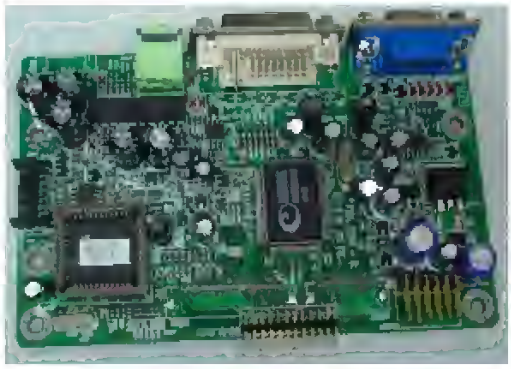
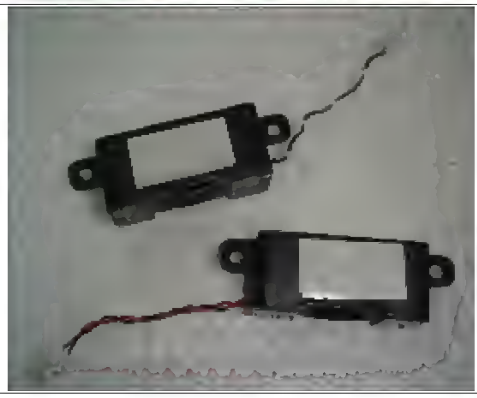
Exploded Diagram (Model: AL1722)



Part List

Item	Picture	Description	Part No.
1		Hinge cover	33L4636 FV L/33L4637 FV L
2		Stand base	34L1189 FV B
3		Front cover	34L1187CGE B
4		Rear cover	34L1188AFV 2B

5		Shield	85L 641 1
6		Metal frame	15L5921 5
7		Panel	750LLS70U21
9		Power board	IDPC 7425C3

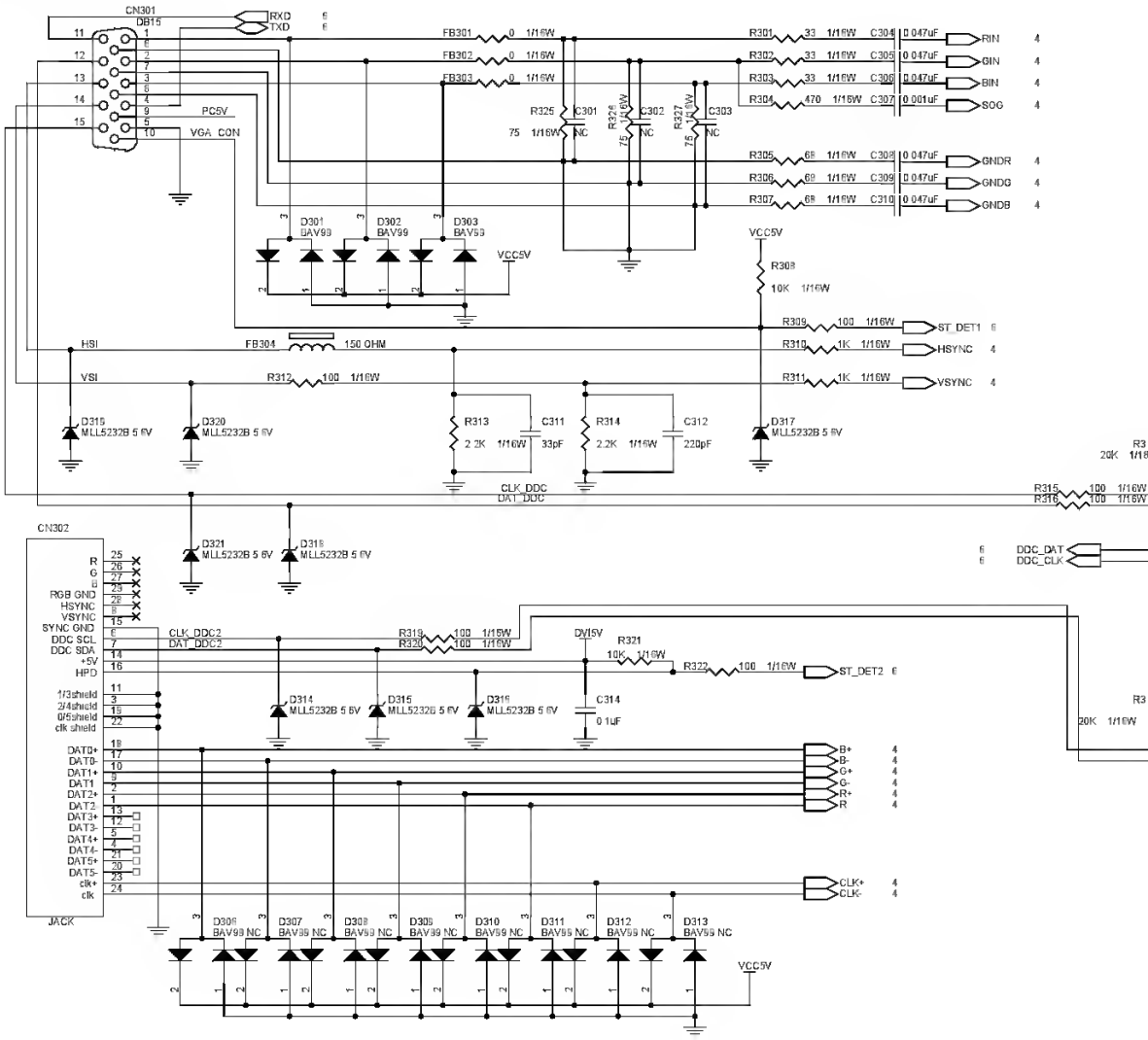
10		Main board	AIC780KS2AE
11		Key board	AIK780KB4
12		Speakers	78L 332 1 L/78L 332 1 R

All manuals and user guides at all-guides.com

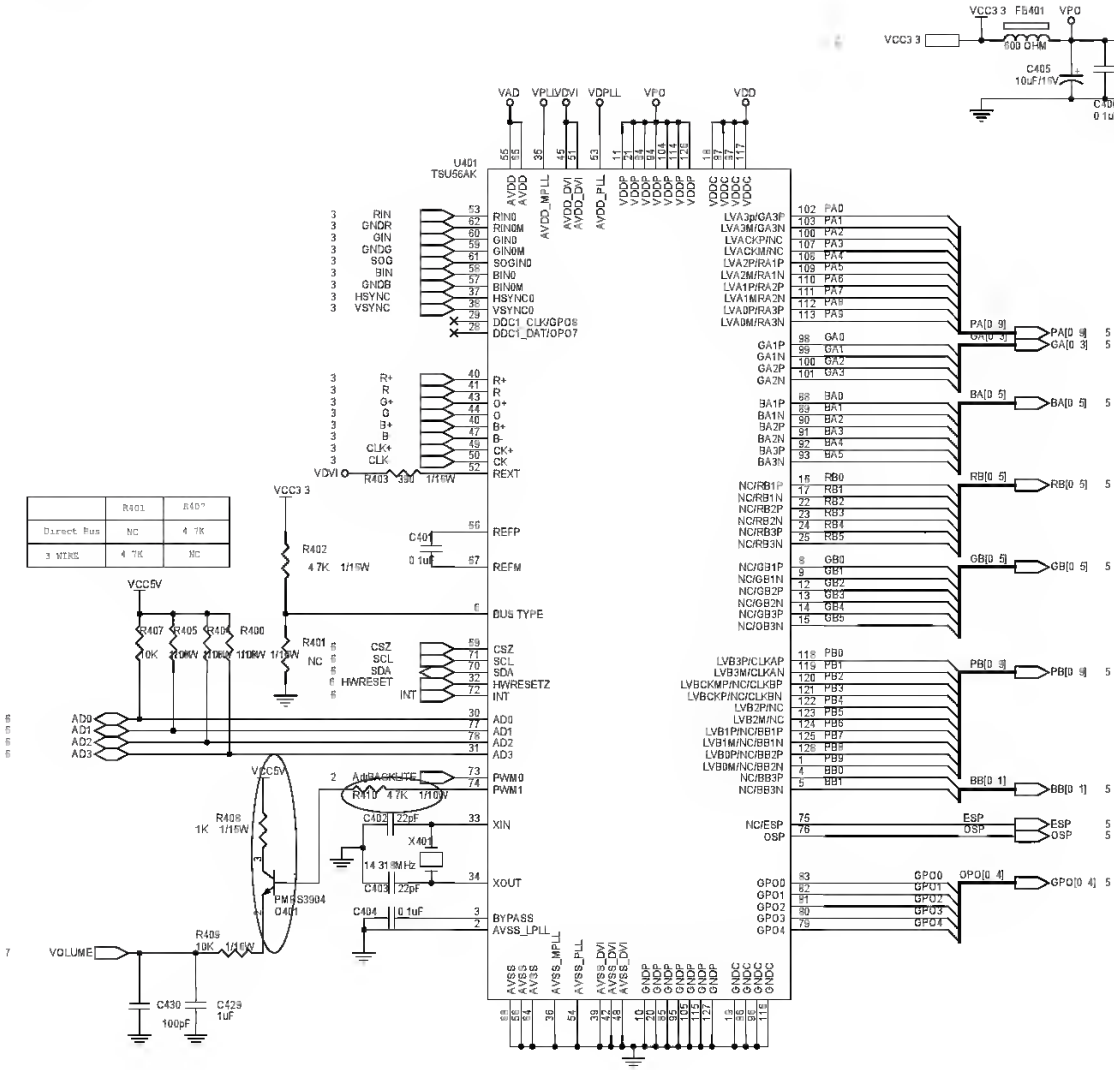
all-guides.com

Schematic Diagram

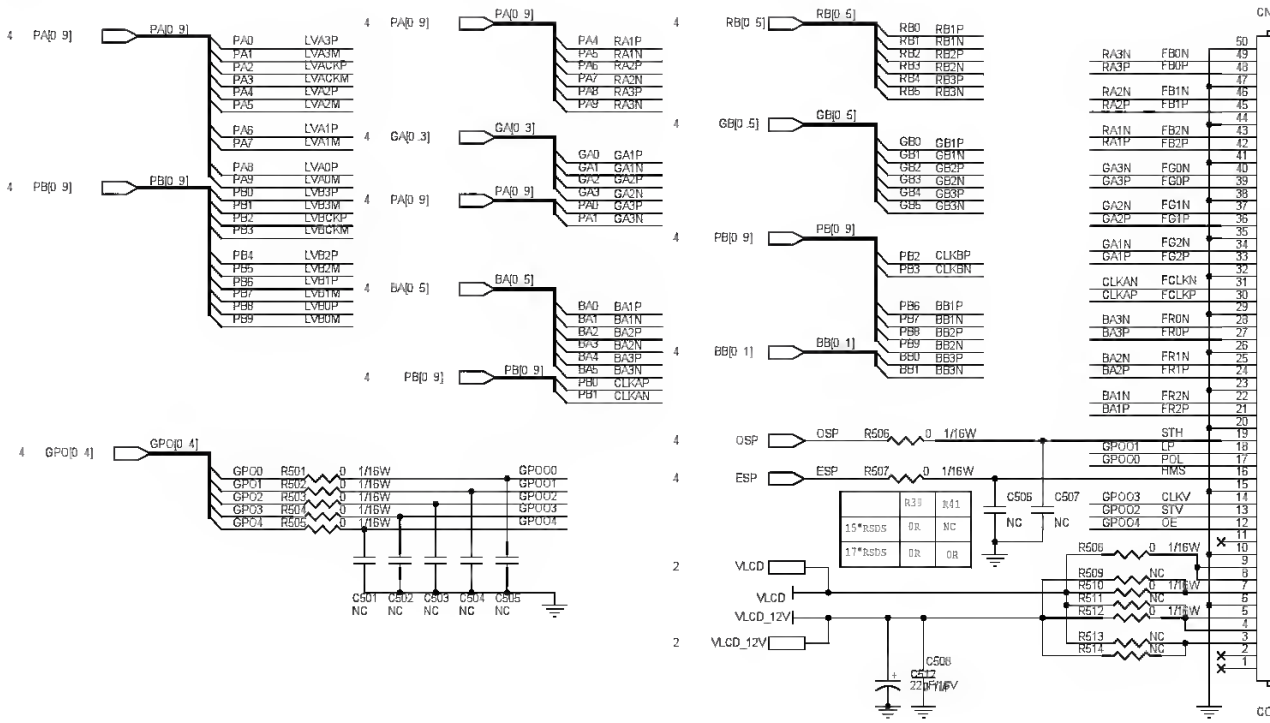
Analog and Digital Input



TSU56AK

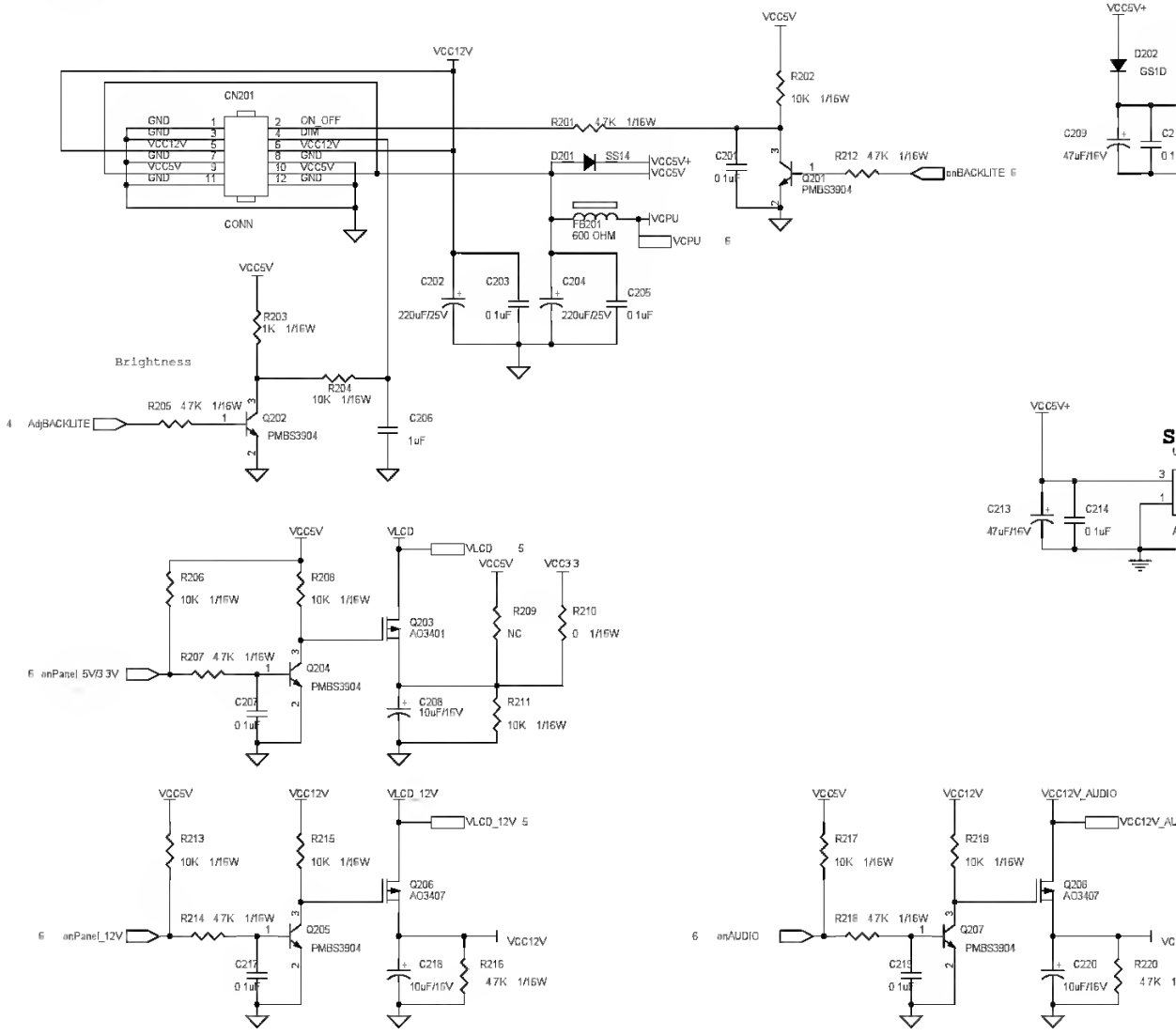

U401
TSU56AK
VAD
VPLL/DVI
VDPLL
VPO
VDD
RIN
GNDR
GIN
GNDG
SOG
BIN
GNDB
HSYNC
VSYNC
R+
R-
G+
G-
B+
B-
CLK+
CLK-
VDVI
REXT
REFP
REFM
BUS TYPE
CSZ
SCL
SDA
HWRESETZ
INT
AD0
AD1
AD2
AD3
PWM0
PWM1
XIN
XOUT
BYPASS
AVSS_LPLL
VCC3 3
VCC5V
R401
R402
4.7K 1/16W
C401
0.1uF
R403 390 1/16W
R407 10K
R405 10K
R406 10K
R400 10K 1/16W
R408 1K 1/16W
R410 4.7K 1/16W
C402 22pF
C403 22pF
X401
14.31818MHz
C404 0.1uF
PMBS3904
R409 10K 1/16W
VOLUME
C430 100pF
C429 1uF
C405 10uF/16V
FB401
VPO
600 OHM
PA[0 9]
BA[0 5]
RB[0 5]
GB[0 5]
PB[0 9]
BB[0 1]
ESP
OSP
GPO[0 4]

LVDS



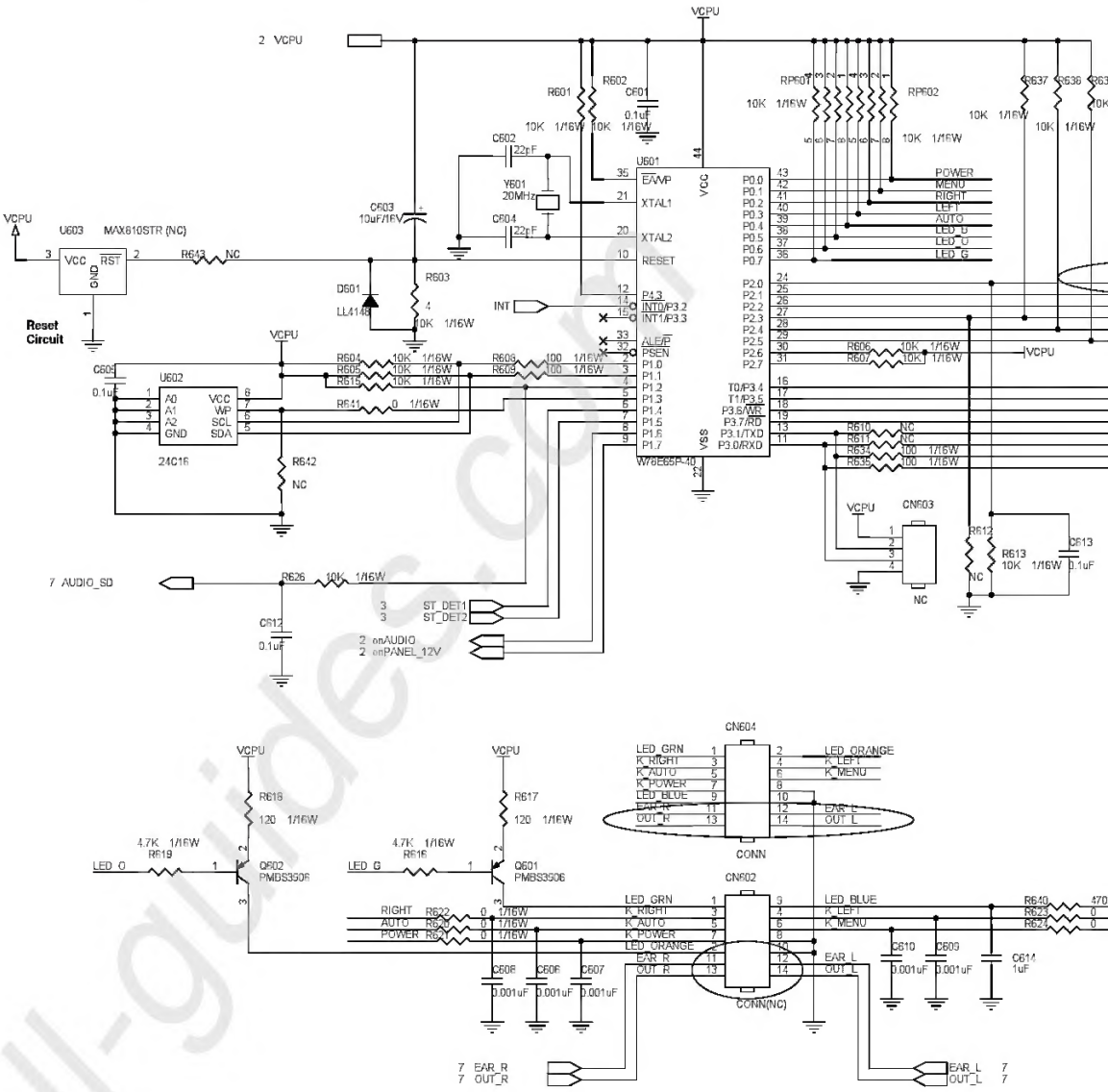
	R508	R509	R510	R511	R512	R513	R5
AU 17	NC	NC	5V OR	5V OR	NC	5V OR	
QDI 17 CPT 17	3.3V OR	12V OR	NC	NC	12V OR	NC	
INNOLUX 15	3.3V OR	NC	3.3V OR	NC	NC	NC	
MahnStar 15 CPT 15	3.3V OR	NC	3.3V OR	NC	12V OR	NC	
LG 15	3.3V OR	NC	3.3V OR	NC	NC	NC	

DC Power


CN201
GND 1
GND 3
VCC12V 5
GND 7
VCC5V 9
GND 11
2 ON_OFF
4 DIM
6 VCC12V
8 GND
10 VCC5V
12 GND
CONN
VCC12V
VCC5V
R202 10K 1/16W
R201 47K 1/16W
D201 SS14
VCC5V+
VCC5V
C201 0.1uF
R212 47K 1/16W
Q201 PMBS3904
enBACKLITE 6
FB201 600 OHM
VCPU
VCPU 6
C202 220uF/25V
C203 0.1uF
C204 220uF/25V
C205 0.1uF
R203 1K 1/16W
Brightness
R204 10K 1/16W
R205 47K 1/16W
4 AdjBACKLITE
Q202 PMBS3904
C206 1uF
VCC5V+
D202 GS1D
C209 47uF/16V
C213 47uF/16V
C214 0.1uF
R206 10K 1/16W
R208 10K 1/16W
VLCD
VLCD 5
VCC5V
VCC3.3
Q203 AO3401
R209 NC
R210 0 1/16W
R207 47K 1/16W
6 anPanel_5V/3.3V
Q204 PMBS3904
C207 0.1uF
C208 10uF/16V
R211 10K 1/16W
R213 10K 1/16W
R215 10K 1/16W
VCC12V
VLCD_12V
VLCD_12V 5
Q206 AO3407
R214 47K 1/16W
6 anPanel_12V
Q205 PMBS3904
C217 0.1uF
C218 10uF/16V
R216 47K 1/16W
VCC12V
R217 10K 1/16W
R219 10K 1/16W
VCC12V_AUDIO
Q208 AO3407
R218 47K 1/16W
6 anAUDIO
Q207 PMBS3904
C219 0.1uF
C220 10uF/16V
R220 47K

All manuals and user guides at all-guides.com

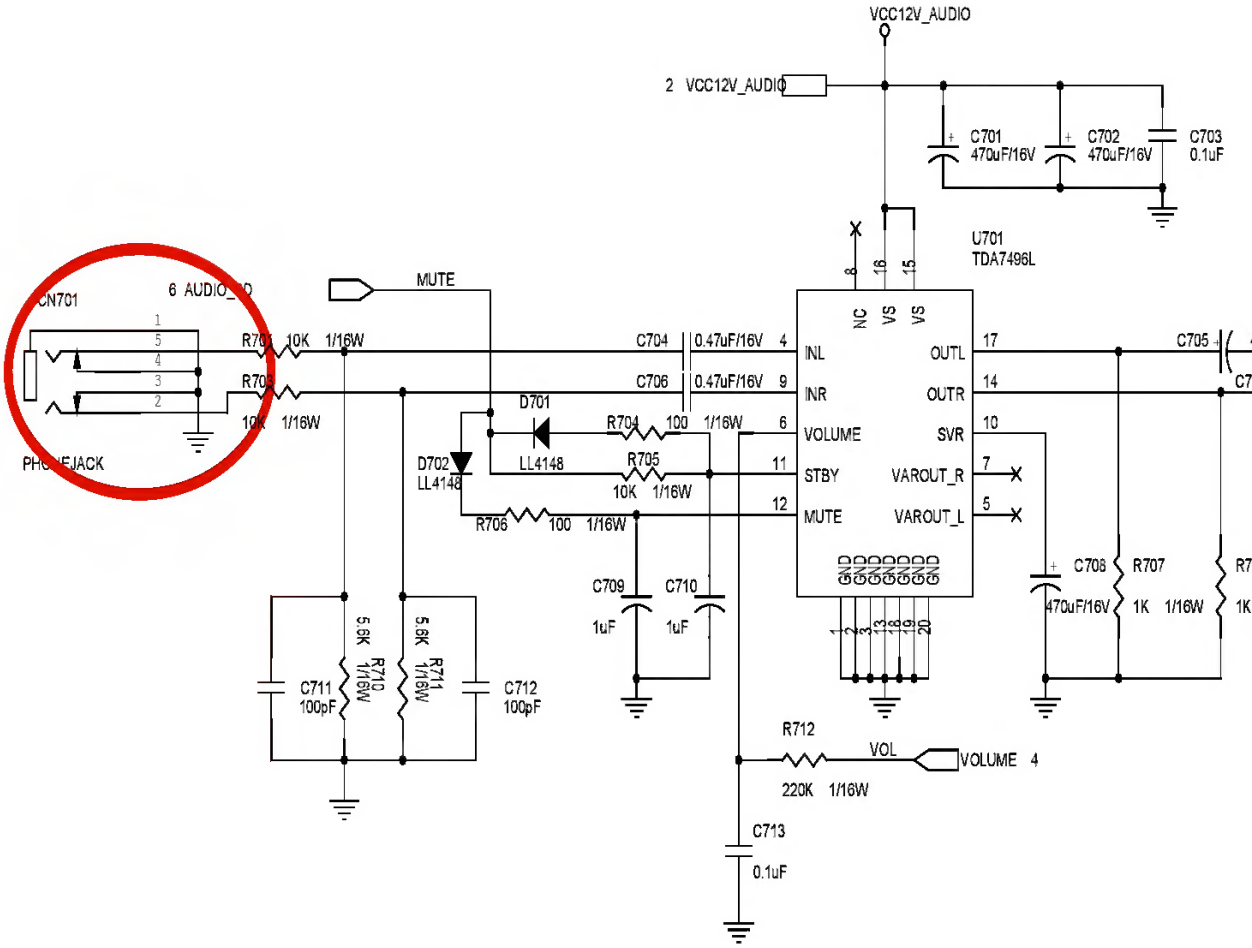
MCU/ Key Board Connector



all-guides.com

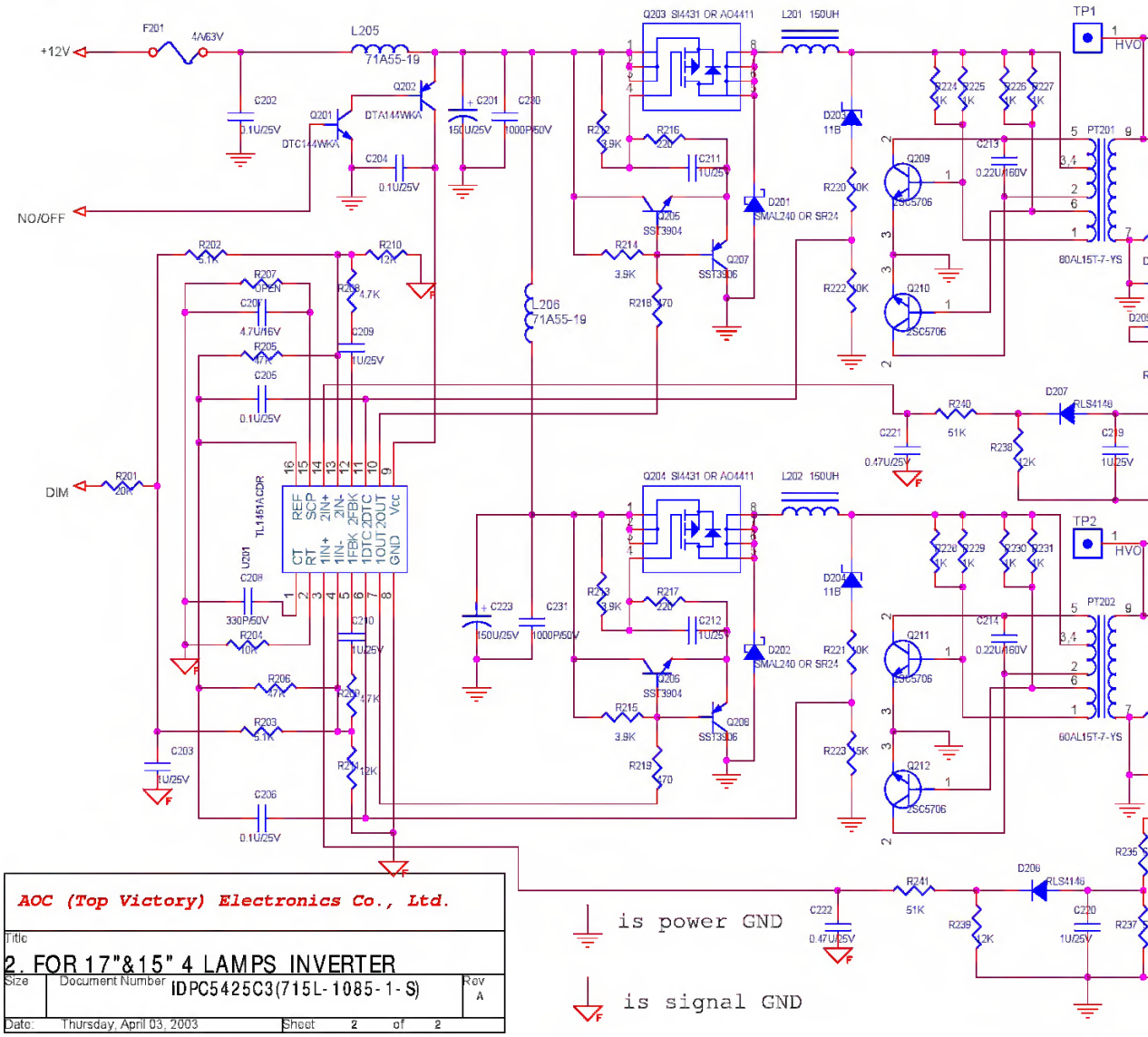
All manuals and user guides at all-guides.com

Audio

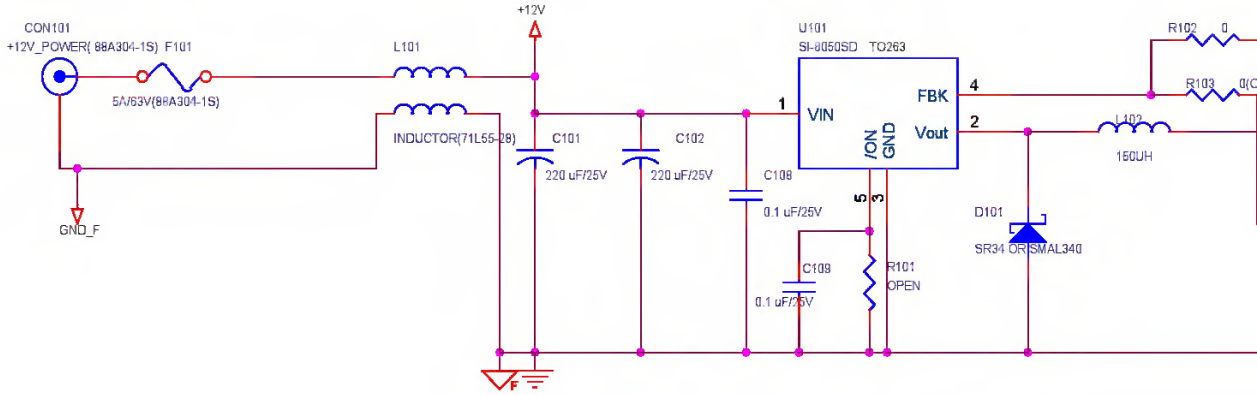


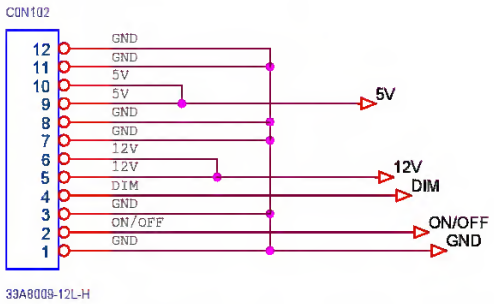
All manuals and user guides at all-guides.com

Inverter Board



All manuals and user guides at all-guides.com





is power GND

is signal GND

AOC (Top Victory)	
Title	
Size A	Document Number IDPC742
Date: Thursday, April 03, 2003	